July 12, 1941

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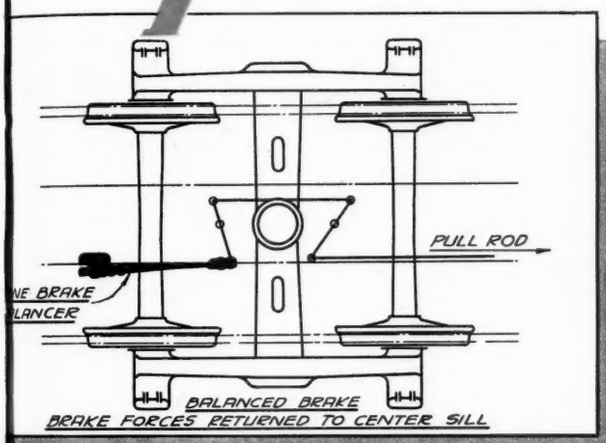
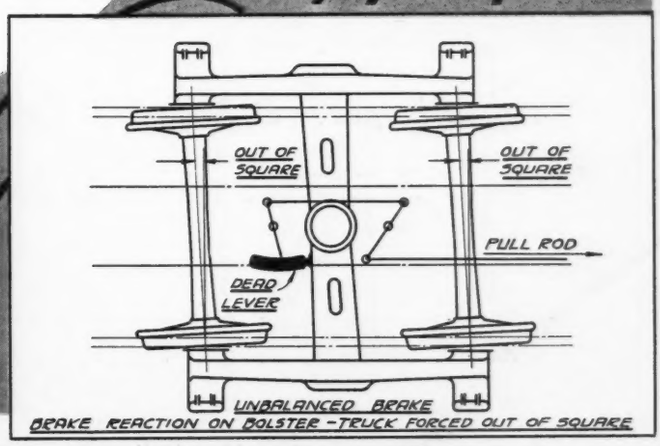
Equalized brakes

WHEEL MILEAGE INCREASED



BRAKE FORCES RETURNED TO CENTER SILL

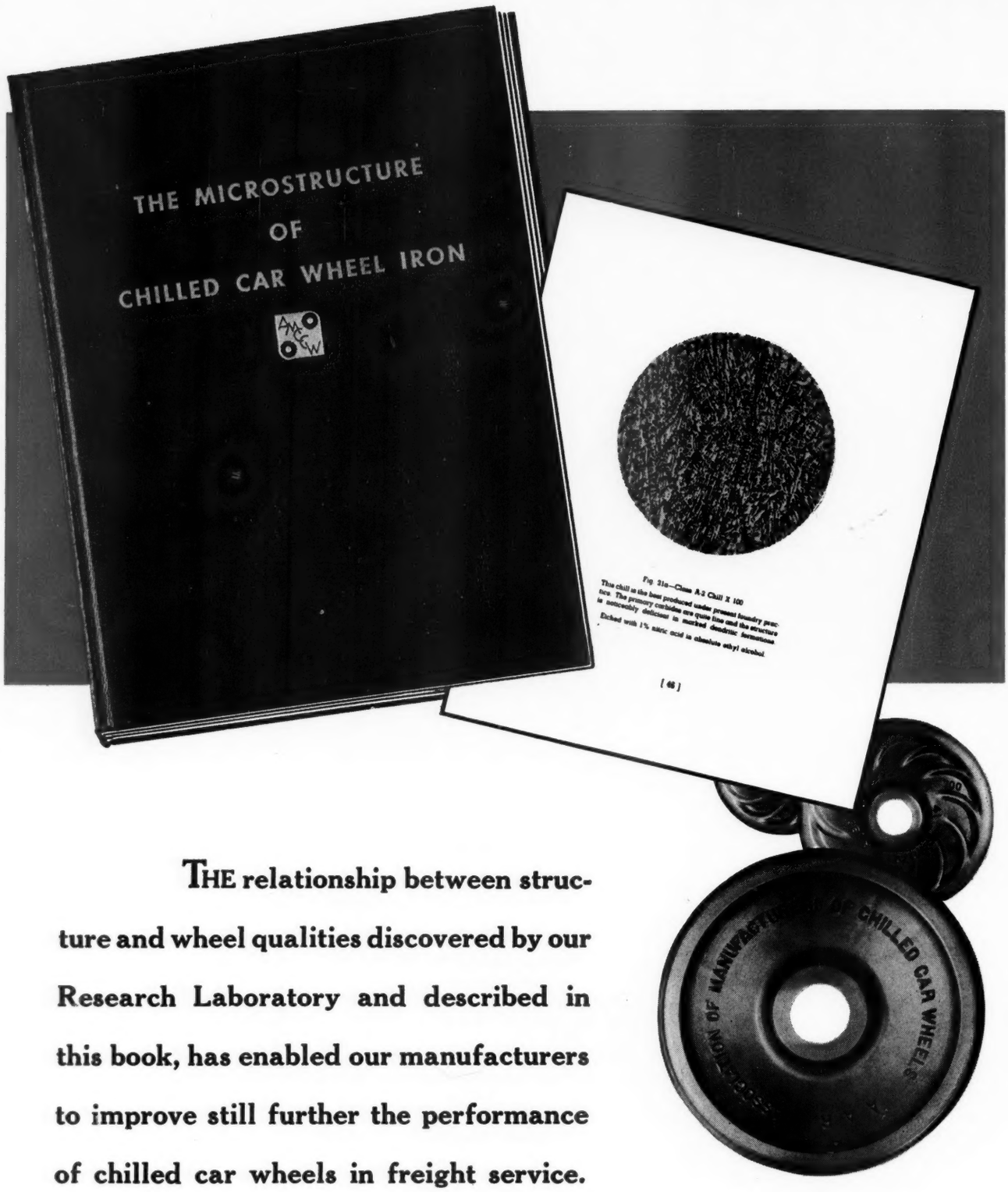


BRAKE REACTION ON BOLSTER - TRUCK FORCED OUT OF SQUARE

Wine

BRAKE BALANCER

THE WINE RAILWAY APPLIANCE CO. TOLEDO, OHIO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Vol. 111 July 12, 1941 No. 2

In This Issue

Many Features of Interest in High Logging Trestle . . . . . Page 52

The creosoted frame-bent structure, notable for its height, built by the Weyerhauser Timber Company to carry a standard-gage logging railway across a deep ravine in the State of Washington, is the subject of this article.

Wheel-Slide Controller Tested 55

This article tells about the device recently developed by the American Brake Shoe & Foundry Co., which prevents wheel sliding under adverse conditions and which has shown good results in preliminary service tests conducted on the Burlington.

EDITORIAL

Mr. Robertson's Case for Bankrupting the Railroad Industry 49

GENERAL ARTICLES

The Central Region Mystery 51
Many Features of Interest in High Logging Trestle 52
Wheel-Slide Controller Tested 55
R. W. Brown Elected Lehigh Valley Head 57
From Panama Canal to Railways 58
Unitloader Developed for Use in Freight Cars 59
The Cause and Cure of Rough Handling 61

NEW BOOKS 62

NEWS 63

REVENUES AND EXPENSES OF RAILWAYS 80

The Railway Age is indexed by the Industrial Arts Index and also by the Engineering Index Service

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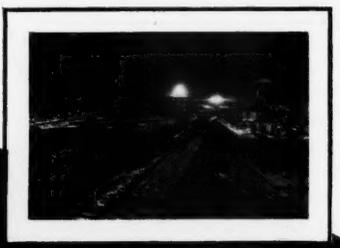
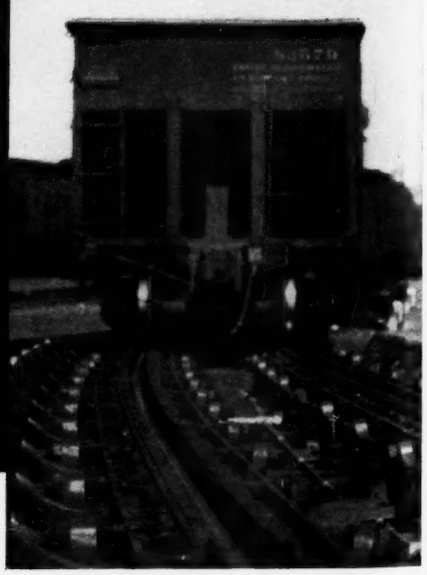
"UNION" ELECTRO-PNEUMATIC CAR RETARDERS

will enable you to:



1. Increase the hourly capacity of the hump, as there is no interruption in humping. With retarders, more business has been handled in two tricks than was handled in three tricks without retarders.
2. Reduce materially the average time of cars in the yard.
3. Eliminate switching at other points.
4. Reduce extra switching because defective cars are classified directly to the bad-order tracks.
5. Move cars from the receiving yard over the hump more promptly, because decreased humping time makes the hump engine available sooner for the next train.
6. Keep classification yards functioning under all weather conditions.
7. Effect savings. One survey discloses an average annual return on the total capital investment of 42.8 per cent and, with traffic as low as only 768 cars in 24 hours, a return as high as 37.8 per cent.

Bulletin No. 155 will be of assistance in planning the modernization of classification yards. We'll be glad to send you a copy upon request.



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Mr. Robertson's Case for Bankrupting the Railroad Industry

Spokesmen of the railway labor unions, in attempting to support their various demands, including advances in wages averaging 41 per cent, rely upon various arguments, but the principal one seems to be that the railways are this year making net operating income (net earnings after expenses and taxes, but before fixed charges) at a rate of about a billion dollars a year, and that the employees are entitled to share in their prosperity. The statement that the railways are making net earnings at a rate of about a billion dollars a year is correct; and this sounds like a large amount; but the railways are a very large industry, and a billion dollars a year is not much for them excepting by comparison with the extremely low net earnings they made during the last decade of depression. They made more than a billion dollars as long as twenty-five years ago, in 1916; and they averaged that much in the ten years ending with 1930. Their investment in 1916 was only 17½ billion dollars, and that much net earnings then produced a return of 5.9 per cent. Their investment now exceeds 26 billion, and a billion net earnings would yield a return upon that of only about 4 per cent.

The railways are having great and increasing demands made upon them for service in handling both commercial and defense traffic. They need to make, and are making, largely increased purchases of equipment and materials in order to provide this service. The amount of purchases they can make from the manufacturing industry always, in the long run, has depended upon and been determined by the amount of net earnings they have made. In 1929, when their net earnings were 1,252 million dollars, they made purchases of almost 1,400 million dollars. In the eleven years 1930-1940, inclusive, when their net earnings averaged only 551 million dollars annually, they made purchases of equipment and materials averaging only 580 million dollars annually.

Results in First Quarter of 1941

In a recent article, which he broadcasted widely, David P. Robertson, president of the Brotherhood of Locomotive Firemen and Enginemen, used in support of his contention that the railways could and should pay largely increased wages, figures showing the increases in their gross and net earnings in the first quarter of 1941 over the first quarter of 1940. We go Brother Robertson one better and give in the accompanying table not only the statistics of the Interstate Commerce Commission showing actual railway results in the first quarters of 1940 and 1941, but also statistics showing what the results in the first quarter of 1941 would have been if none of the other demands of the labor unions had been complied with, but if only the wage advances averaging 41 per cent demanded had been in effect during that quarter.

The reader will note that in the third column of the table there are given only two figures exceeding those showing **actual** results in the first quarter of 1941 given in the second column. One of these increases is in the figure for total operating expenses, which an advance of 41 per cent in pay (exclusive of that of officers) would have made almost 200 million dollars larger than it actually was. The increase in gross earnings (total operating revenues) over 1940 was 16.8 per cent; and, of course, it would not have been affected. The **actual** increase in operating expenses over 1940 was 8.2 per cent; but if the advances in pay demanded had been in effect it would have shown an increase of 35 per cent. The other figure we have increased is that of payroll taxes; because the railways have to pay a tax of 6 per cent on their payroll to provide retirement pensions for their employees; and, of course, they would have had to have paid this 6 per cent on the **addition** to the payroll.

Proposed Increases Would Have Caused a Deficit

But these two increases in the figures for the first quarter of 1941 do plenty to the rest of the figures for that quarter. They reduce by almost 200 million dollars the net revenue the railways had after paying merely their operating expenses and taxes. After meeting their operating expenses, taxes and rentals, the railways had left 116 million dollars net operating income in the first quarter of 1940 and more than 200 million in the first quarter of 1941—an increase of 74 per cent. But, as the figures in the third column show, if the advances in wages demanded, and the consequent increase in payroll taxes, had been in effect, they would have had no net operating income at all, but a deficit of $242,000 in the first quarter of 1941. Their operat-

ing expenses and taxes in the first quarter of 1940 were 85 per cent of their gross earnings. In the first quarter of 1941 they were only 79.8 per cent; but if the advances in wages and taxes demanded had been in effect, their operating expenses and taxes in the first quarter of 1941 would have consumed 97.3 per cent of their gross earnings; and what they had to pay in rentals for equipment and joint facilities would have more than consumed the remaining earnings.

Railway Earnings and Purchases

In the statement he broadcasted Mr. Robertson threw a fit because the *Railway Age* had intimated that if the net earnings the railways are now making were virtually or entirely wiped out by the advances in their costs being demanded by the labor leaders, they would be rendered unable to buy the equipment and materials they will require to enable them to render adequate service. He asserted that this publication "suggests that labor should forego wage increases in order that the railways may purchase additional equipment **needed only for national defense** out of earnings." This paper has made no such statement; and Mr. Robertson knew perfectly well that it had not when he said that it had. One of the difficulties in dealing with some labor leaders is that they consider truthfulness a very minor virtue. What the *Railway Age* said was that the railways would need to continue making net earnings as large as they were making to purchase the equipment and materials required to enable them to handle their share of **both the commercial and defense traffic** of the country. And Mr. Robertson tacitly admitted that what we said was true, and that the railways would not have the required net earnings if the demands of the labor unions were complied with. He admitted it by saying, "If more cars and equipment are required solely for national defense"—and we never said they were required solely for national defense—"then that is a legitimate expense of national defense and should be treated as such. In all industries, the government is quite willing to pay, and does pay, the cost of extra equipment required by reason of national defense." We challenge the correctness of that statement; and we also challenge anybody to show with anything approaching approximate accuracy how much additional equipment the railways are going to require for commercial traffic and how much for defense traffic.

Should Tax-Payers Buy Equipment and Materials for Railways?

What Mr. Robertson's argument means, however, is perfectly plain: The railways should advance the pay of their employees an average of 41 per cent and comply with other union demands, well knowing that this would virtually or entirely wipe out their net earnings and destroy their buying power; and that they should then call upon the government, as a "defense" measure, to provide them needed equipment and materials. But the government can't get any more money excepting either by increasing its indebtedness or increasing taxes. So the labor-union argument is that the railways should greatly increase their payroll and the taxes on it, and impose on the tax-paying public the burden of providing railway equipment and materials in addition to all the other burdens imposed on the tax-paying public.

There might be some merit in this contention if (1) the railways needed more equipment and materials solely to handle defense traffic, and (2) the other arguments for increases in pay advanced by the railway labor leaders were valid. But (1) the railways need more equipment and materials to handle both commercial and defense traffic, and (2) there is no good reason for the advances in pay which labor leaders have demanded. They claim there has been an increase of 43 per cent in the "productive" efficiency of railway employees since the last wage advances in 1937; but they cannot cite any evidence remotely supporting this claim. They claim that the wages of railway employees have been falling behind those of wage earners in the manufacturing industry, and cite high wages in a few industries; but it has been shown in reply that in February, according to the latest figures of the Department of Labor, the average weekly earnings of all factory workers in the country were $28.56 a week, while those of railway wage earners were $36.58, or 28 per cent higher. They claim that railway employees are suffering from increased cost of living; but it has been shown in reply that, measured by the cost of living, their present weekly

Actual and Estimated Railway Results, First Quarters 1940 and 1941

	First quarter of			First quarter of 1941 (Including proposed increased wages and payroll taxes)	
	1940 (Actual)	1941 (Actual)	Per cent Inc. or Dec. 1941 compared with 1940		Per cent Inc. or Dec. 1941 compared with 1940
Total Operating Revenues	$986,365,762	$1,152,106,850	+16.8	$1,152,106,850	+16.8
Total Operating Expenses	746,610,542	807,887,616	+ 8.2	1,007,833,274	+35.0
Net Rev. from Ry. Operations	239,755,220	344,219,234	+43.6	144,273,576	−39.8
Taxes:					
Payroll taxes	28,101,254	29,993,537	+ 6.7	31,793,149	+13.1
Other taxes	63,413,893	81,285,573	+28.2	81,285,573	+28.2
Total taxes	91,515,147	111,279,110	+21.6	113,078,722	+23.6
Income from Operations	148,240,073	232,940,124	+57.1	31,194,854	−79.0
Rentals (Equip. & Jt. Fac.)	32,336,507	31,436,907	− 2.8	31,436,907	− 2.8
Net Operating Income (or deficit)	115,903,566	201,503,217	+73.9	Def. 242,053	Def.
Ratio of Expenses to Total Revenues (per cent)	75.7	70.1	....	87.5	....
Ratio of Expenses and Taxes to Total Rev. (per cent)	85.0	79.8	....	97.3	....

earnings are 31 per cent higher than in 1929 and, by an increase of 41 per cent, would be made 85 per cent higher than in 1929.

We are even old-fashioned enough to contend that the financial effects on the railroads should be considered. It has been estimated, and we believe conservatively, that compliance with all the demands of the unions would increase railway operating expenses and taxes a total of 900 million dollars a year. That would wipe out all but 100 million dollars of the 1 billion dollars a year net earnings that we agree with Mr. Robertson the railways are now earning. Mr. Robertson says, "If some security holders today are in an unfortunate position it is because they failed to direct their managers, or they tacitly participated in temporary financial benefits to be derived from short sighted policies of their managers. It is contended that labor should sacrifice to protect security holders, that labor should forego a part of the very sustenance upon which its life depends in order to afford larger return on a percentage of dubious capital."

Thus he drags across the controversy the old red herring of alleged overcapitalization as an argument for an increase in costs which would bankrupt almost every railway system in the United States, however conservatively it has been financed. If this advance in costs were made it would wipe out, as we have said, all but about 100 million dollars of the annual net earnings now being made. The railways have "other income" of about 160 million dollars a year which, added to their net earnings, would make "total income" about 260 million dollars. Allowing for certain deductions, this would leave them income of 235 million dollars with which to meet total fixed charges of 608 million dollars —in other words, with a deficit of 373 million dollars after fixed charges, a deficit three times as large as they had in 1932, the worst year of the depression.

Some say the demands of the labor leaders are so plainly exorbitant and extortionate that it is inconceivable they can expect that all, or any large part, of them will be granted. Well, all we know is that these are the demands they actually have made, and that compliance with them would so utterly bankrupt and irretrievably ruin the industry by which the members of the unions are employed that they would soon all be working for the government. And President Roosevelt himself often has said that strikes against the government will not be tolerated.

The Central Region Mystery

Now here is a funny one. In the Central Region, net operating revenues of common carrier truckers in the fourth quarter of 1940 did not keep pace with their large increase in gross, and the poor fellows are skating on thin ice. That isn't what's strange, though. What is mysterious is that the experience of these particular carriers is diametrically opposite that of the motor carriers of the country as a whole.

For example, if you take the Central Region out of the I. C. C. report for all motor carriers in the last quarter of 1940, you find that *all the rest of the motor carriers in this quarter had an increase of over 400 per cent in operating net.*

What is there so different about the situation of the Central Region truckers that makes their experience contrary to that of the progressive industry of which they are so vocal a part? Have truck wages gone up in the Central Region, and not elsewhere? Do these boys have to pay more for their trucks or their fuel than other operators? If so, the fact is not generally known.

Ordinarily, when a business enjoys an increase of 20 per cent in its sales—without an increase in its unit (variable) costs—a large part of the rise in gross is carried through to net.

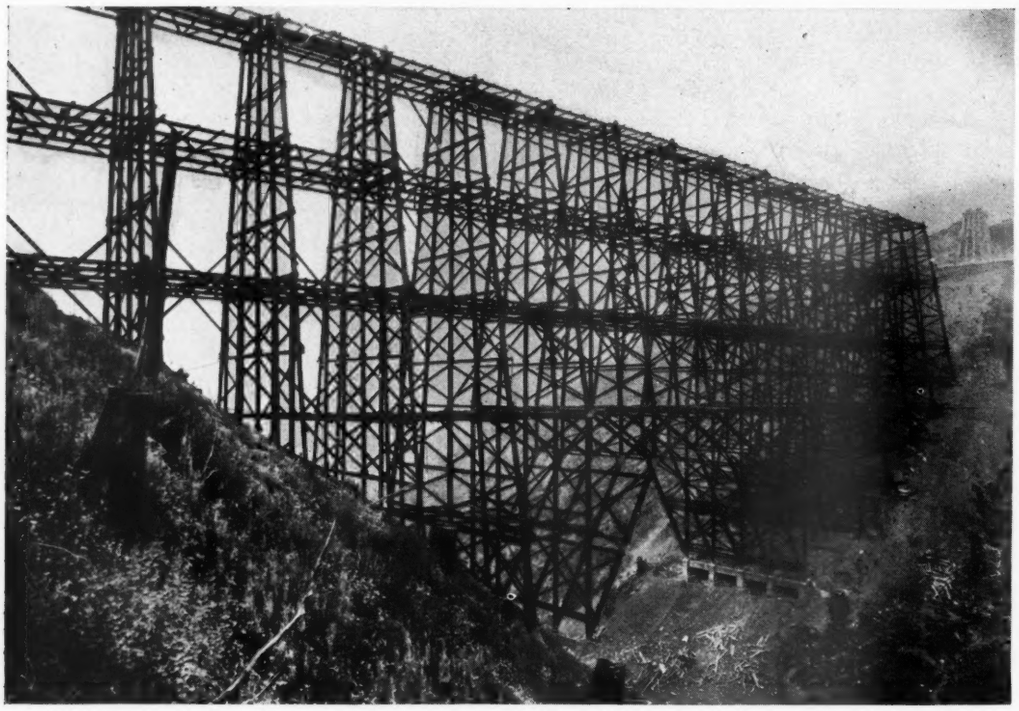
Take the New England motor carriers, for instance. Unlike the truckers in the rest of the country, these enlightened haulers do not base their rates on the railroad rate structure—disregarding the inherent characteristics of trucking. In a general way, their rates are related to their own costs of operation. Well—these New England carriers in 1940 had an increase of only 8 per cent in gross, *but their increase in net was nearly 50 per cent.* In the fourth quarter of 1940 they did only 10 per cent more gross business than in the last quarter of 1939, *but their net increased almost 200 per cent.*

In short—the common carrier trucking business as a whole is working under the economic condition known as "decreasing costs" and "increasing returns", while the Central Region segment of the industry (according to its figures) is operating under "increasing costs" and "decreasing returns".

This is a startling paradox; and merits—not just speculation as to its causes—but searching investigation of them. Especially since the Central Region truckers (already much given to tying their rates to the railroad rate structure) are seeking rate increases, still more closely to parallel railroad rates. If the rate policy pursued by the Central Region truckers—and which they seek to pursue even more assiduously—is right and that of the New England operators is wrong, why is it that it is the Central Region truckers, and not those of New England, who are in distress?

There are students of transportation who do not believe that, in the long run, it is safe to try to carry on monopolistic (i.e., arbitrary) pricing when no actual monopoly exists. There is, of course, always *some* traffic for which private transportation cannot be provided—and the profits on this, at rates far above cost, look very inviting. But, more and more, shippers who find themselves in this situation discover means of getting transportation at prices somewhere near the cost of providing it.

Now, if a business gets itself into a situation like this—what is the remedy? Further increases on the relatively small volume of traffic where they can be made to "stick"? Or a resolute facing of the facts—and adoption of pricing practices which meet economic realities?



The Central Section of the High Trestle Over Baird Creek, in Cowlitz County, Wash., As It Appeared When Nearing Completion

Many Features of Interest in High Logging Trestle

Creosoted frame-bent structure, 1130 ft. long and 235 ft. high involves innovations in design and unusual methods of construction. Timber connectors are used effectively

AN outstanding preframed creosoted timber trestle, which is notable because of its extraordinary height, its unusual design, the method of its construction, and its extensive use of timber connectors, has been constructed by the Weyerhaeuser Timber Company to carry a standard-gage logging railway across a deep ravine in the state of Washington. This structure is 1,130 ft. long and, with a maximum height of 235 ft., it is believed to be one of the highest timber trestles in the country. Among the noteworthy features of design of the bridge are its 30-ft. panel lengths, and the 120-ft. three-hinged timber arch that was inserted in the structure to give an unobstructed opening for the passage of debris carried by the stream. Construction of the bridge was facilitated by the use of an overhead cableway which was even used to transport a pile driver across the ravine.

This trestle is located in eastern Cowlitz county in Washington, and spans Baird creek which is a branch of the Coweeman river. The necessity for its construction arose when the timber company decided to open the Kalama River watershed for logging operations. A single-track standard-gage line was projected into the watershed and it was found that the most desirable location required the crossing of Baird creek; which consists of a normally dry water course at the bottom of a deep wide ravine.

In designing a bridge for this location, it was necessary to give consideration to a number of factors. For instance, during certain times of the year there is a heavy flow in the stream, with a large amount of debris carried by the water, and it was necessary that any bridge across the stream provide an unobstructed waterway of ample width. Secondly, it is the company's intention to operate the Kalama River watershed on a sustained yield basis, which made it desirable to construct a permanent bridge rather than a crossing of the temporary and less expensive type that is more commonly associated with logging operations.

It was considered necessary to design the bridge to carry Cooper's E 50 loading. The structure was also designed to resist the maximum longitudinal thrust imparted by a train covering the entire structure, and to withstand the lateral force of a gale blowing at the rate of 90 m. p. h.

When the location and alinement of the line had been established, it was found that the crossing of Baird creek would require a bridge 1,130 ft. long, the central 286 ft. of which would be on a tangent connecting 15-deg. and 16-deg. curves. An investigation of the subsoil conditions at the site revealed that on the west slope of the ravine and in the creek bottom there was a thin layer of overburden covering solid rock, while on the east slope the overburden became much deeper.

In a study that was made to determine the type of

bridge that would be most suitable and economical for the location, nine different types of structures were given consideration, namely; (1) a standard cedar trestle with 5-pile bents, creosoted bracing and a leaning-bent arch over the stream; (2) same as (1) except with the bents on 30-ft. centers; (3) a creosoted timber trestle with bents on 16-ft. centers; (4) a creosoted timber trestle with bents on 30-ft. centers and an arch over the stream; (5) a creosoted timber viaduct with several different truss and tower designs; (6) a concrete and timber viaduct with hexagonal concrete piers and creosoted timber trusses; (7) concrete piers and creosoted timber trusses, with pile-trestle approaches; (8) an all-steel viaduct; and (9) a steel viaduct with pile-trestle approaches.

Comparative cost estimates of these different structures, calculated on the basis of the cost per square foot of side elevation, were as follows:

(1) Standard cedar trestle	$0.37
(2) Cedar trestle with bents on 30-ft. centers	0.39
(3) Creosoted timber trestle with bents on 16-ft. centers	0.474
(4) Creosoted timber trestle with bents on 30-ft. centers	0.457
(5) Creosoted timber viaduct	0.316
(6) Concrete and timber viaduct	0.712
(7) Concrete-timber viaduct with pile-trestle approaches	0.503
(8) All-steel viaduct	1.025
(9) Steel viaduct with pile-trestle approaches	0.722

A comparison of these figures, in connection with a careful analysis of each type of structure, led to the conclusion that the creosoted timber trestle with bents on 30-ft. centers would be the most suitable for this location. Although a structure with this bent spacing would obviously require the use of heavier stringers than would be needed if the bents were spaced the conventional 14 ft. to 16 ft., the added expense thus entailed would be offset by the reduction in the number of bents needed.

Details of Design

As constructed, the bridge embodies a central section or main span 480 ft. long which incorporates a three-hinged arch over the stream and which is flanked by a 250-ft. pile-trestle approach at one end and a 400-ft. pile-trestle approach at the other. The central section has a total of 17 bents—15 frame bents and 2 pile bents—which are spaced 30 ft. apart. On the west slope of the ravine, the bents in the main span are all founded on concrete pedestals resting on solid rock, while on the east slope, where the overburden is much deeper, four of the bent footings are of timber piles which tie into the first and second stories of the trestle. The two bents at the extreme easterly end of the central section are of driven piles.

Each of the frame bents in the main bridge consists of five posts, that in the center being vertical while the two on each side are on a batter. The outside posts are 14-in. by 14-in., while the other three are 12-in. by 14-in. pieces. Other members consist of 3-in. by 10-in. sway and sash braces, 4-in. by 10-in. tower braces, 6-in. by 12-in. girts, and 3-in. by 10-in. girt bracing. The stringers are 30½ in. deep and are arranged in two chords of three stringers each.

The stories in the structure are 30 ft. in height and the posts are continuous from the footings to the deck, the ends of abutting posts at the stories being separated by sheets of 10-gage galvanized iron. To give uniformity to the top stories of the bents, the necessary superelevation on the curved portions of the structure was obtained by dapping the ties as required. All girts were so sized as to provide a level surface on top while being fastened flat against the batter posts.

The Timber Arch

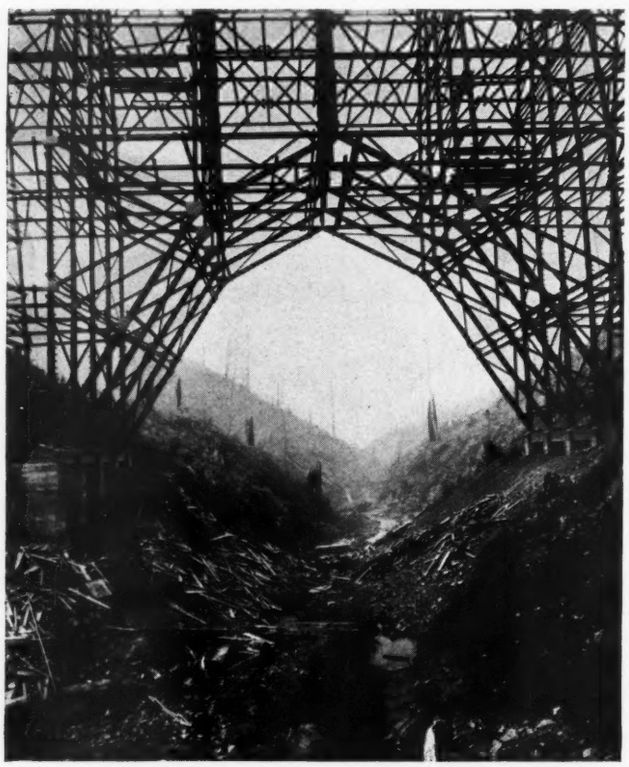
The three-hinged timber arch that is incorporated in the trestle is 60 ft. high between the spring line and the crown of the arch and 105 ft. high between the streambed and the arch. As already stated, it has a span of 120 ft. It is supported at each end at the springing line on a concrete abutment that also serves as the foundation for one of the frame bents.

Since a portion of the trestle is superimposed on the arch, it was necessary to design the latter accordingly. In reality it is composed of five separate timber arches or sections to correspond in number and spacing with the posts in the bents. Also the panel points of the arch are arranged to correspond with the spacing of the bents, so that at each panel point the arch receives one of the overhead bents. All joint connections in the arch are made with the aid of steel gusset plates, and to reduce the load to be transmitted through these plates, the spaces or voids at the joints were filled with concrete. This was done by pumping the concrete through holes

The Frame Bents Were Assembled in One-Story Sections and Were Handled Into Position by a Cableway

in the gusset plates, which were provided specially for the purpose.

As noted at the outset, timber connectors of various types were used extensively in the construction of the trestle. For instance, a four-inch connector of the split-ring type is placed at each end of every brace in the framed portion of the structure. In the approaches, which are of pile-bent construction, toothed rings were used at the joints between braces, and single-curve spike grids were employed in fastening the braces to the piling.



Looking Through the Three-Hinged Timber Arch in the Main Span

In the arch, flush-type shear plates were inserted between the gusset plates and the timbers.

Construction Procedure

During the construction of the bridge it was accessible by rail only from the west end. Work on the structure was started in the spring and one of the first steps was to remove the overburden from the rock underlying the west side of the ravine. This was done by hydraulic action, using a pump that was brought to the site for the purpose. Next, pockets were blasted in the rock to receive the concrete pedestals.

In the meantime a cableway was constructed across the ravine at the site of the bridge and a short section of the westerly approach trestle was built. Next a two-sack skid-type mixer was set up on a platform under this portion of the trestle, and stock piles of sand and gravel were dumped through the trestle. From the mixer, concrete was dumped into a hopper from which it was discharged into a one-yard bucket operating on the cableway. An engine-operated double-drum hoist was used to move the bucket back and forth between the mixer and the pedestal forms.

While the substructure work was under way, a pile driver was transported across the ravine on the cableway to drive the footing piles that were needed for four of the frame bents in the main span and the two pile bents at the extreme easterly end of this span. When this work had been completed, the driver proceeded with the construction of the easterly approach trestle.

Timber Preframed and Treated

All timber used in the construction of the trestle was prefamed and bored and then treated by the empty-cell process with a 50-50 mixture of creosote and petroleum. Material under six inches in thickness was treated with 10 lb. of preservative per cubic foot, while all pieces over that thickness were given an 8-lb. treatment. As shipped to the site of the work, most of the material was arranged in units, each of which consisted of all the timber necessary to construct a one-story section of one of the bents. The units were assembled on an erection platform located under the cableway at the westerly end of the bridge, and as each part was completed it was picked up and shifted on the cableway to its location in the bridge and bolted in position. The arch was also assembled in convenient units on the erection platform and lowered into position from the cableway.

In the erection work, the bents were first built up to the level of the crown of the arch, after which the latter was erected. From this point, the remaining stories in the main span of the bridge were erected a bent at a time, there being four stories above the top of the arch. Meanwhile, with all material being delivered over the cableway, the easterly approach trestle was under construction, and the progress of the work was such that the decking on this approach was being completed at the same time that the stringers were being inserted in the main span. The pile driver then moved back across the ravine on the completed center section and drove the remainder of the piles for the westerly approach.

The manner in which some of the frame bents were handled into position gives an idea of the rigidity of this structure. Among the largest of the one-story bents were those for the "B" story, each of which was 68 ft. and 56 ft. wide at the bottom and top, respectively. Each of these bents was handled in the horizontal position by means of four lines, one at each end of each of the inside batter posts. The fact that it was possible to handle the bents in this manner without the use of bolsters was attributed to the strong bracing and the use of timber connectors.

This project was carried out under the general supervision of W. J. Ryan, chief engineer of the Weyerhaeuser Timber Company. T. K. May, engineer of the West Coast Lumbermen's Association, and W. D. Smith, of the United States Forest Service, assisted in the design of the bridge. The timber for the 480-ft. center section was prefamed by Timber Structures, Inc., Portland, Ore., at the mill of the Weyerhaeuser Timber Company at Longview, Wash., after which it was sent to St. Helens, Ore, for treatment by Pope & Talbot. The bridge was erected under contract by the Hart Construction Company, Tacoma, Wash.

PASSENGER AND FREIGHT TRAFFIC on trains and steamers of the Newfoundland railway has greatly increased, due to defense activities in that colony. In January, 1941, the carrier handled 45,288 tons of freight, an increase of 16,188 tons over January, 1940. Passengers by railroad and steamer totaled 14,491 in January, 1941, an increase of 1,475 over the corresponding period of 1940. Freight traffic in February was 45,326 tons, as compared with 34,445 tons, and passengers carried comprised 15,925, compared with 10,579 in 1940.

Wheel-Slide Controller Tested

American Brake Shoe device prevents wheel sliding under adverse conditions on Burlington passenger train

A WHEEL-SLIDE controller, recently developed by the American Brake Shoe & Foundry Co., New York, has shown good results in preliminary service tests on the Chicago, Burlington & Quincy, where it has been applied to three articulated four-wheel, clasp-brake-type trucks on one of the Twin City Zephyr trains for over seven months and to all other car trucks on the train for about three months. During this time, it is reported that no controller maintenance has been required nor any evidence of wheel sliding found, although wheels in the articulated trucks formerly were serious offenders from a wheel-sliding standpoint. Indeed, before the application of the device, most of the other wheels in the train, except power wheels, slid flat once or several times, depending upon their location and the prevalence of conditions particularly conducive to wheel sliding.

Controller Prevents Sliding During Braking

The purpose of the controller is to prevent the sliding of railway wheels during braking. The instant slipping begins, the device automatically closes circuits to control devices which momentarily reduce the braking on that truck. Normal rolling is restored before the wheels can actually stop rotating and slide along the rail. The brakes are automatically reapplied as soon as normal rolling is restored. The train can thus be more effectively braked when allowance does not have to be made for possible damage to wheels that may slide at random locations in the train.

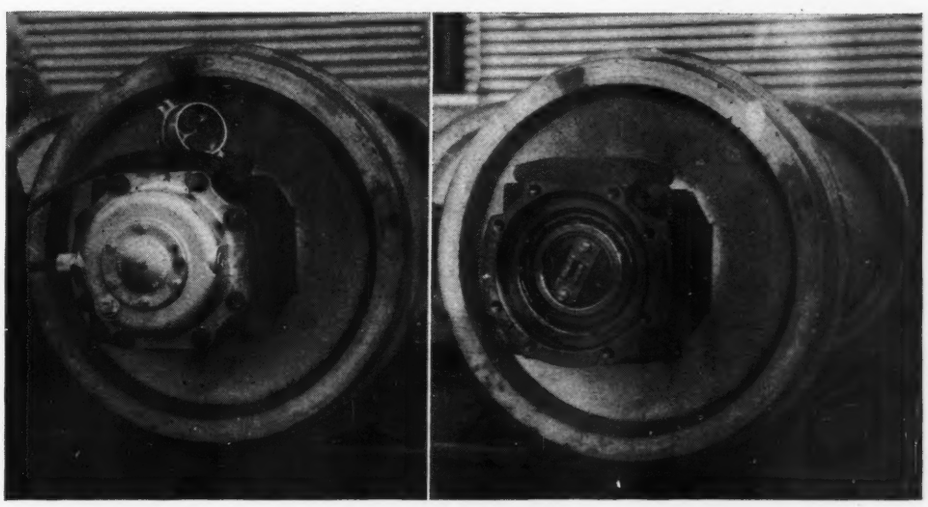
The operation of the American Brake Shoe controller is based on the fact that individual pairs of railway wheels, in the same truck, rotate in substantial synchronism (i. e. at identical speeds, except for the normal difference in rotation due to variations of wheel diameter) unless there is slipping at the contact of some of the wheels with the rails. The instant slippage begins with any pair of wheels, these wheels will rotate in relation to other pairs at an abnormal rate, which will continue until slippage stops and normal rolling is restored. Tests indicate that no two pairs of wheels start to slip and slow down at exactly the same time, so this device is well adapted to prevent wheel sliding in any truck to which it is applied.

The slip-detecting mechanism required for a four-wheel truck consists of (1) a commutator-type switch mounted in place of a journal cap at each pair of wheels, and (2) two slow-to-release relays and one operating relay, mounted on a control panel in the car. The term "slow-to-release" relay is used to designate a switching relay which has been adjusted to remain operative (holding its contacts closed) for a predetermined time after the circuit which actuated the relay has been reopened. Each commutator-type switch contains a rotor so connected as to turn with the axle. The rotor, which also may be described as a brush holder, is the only moving part of the switch.

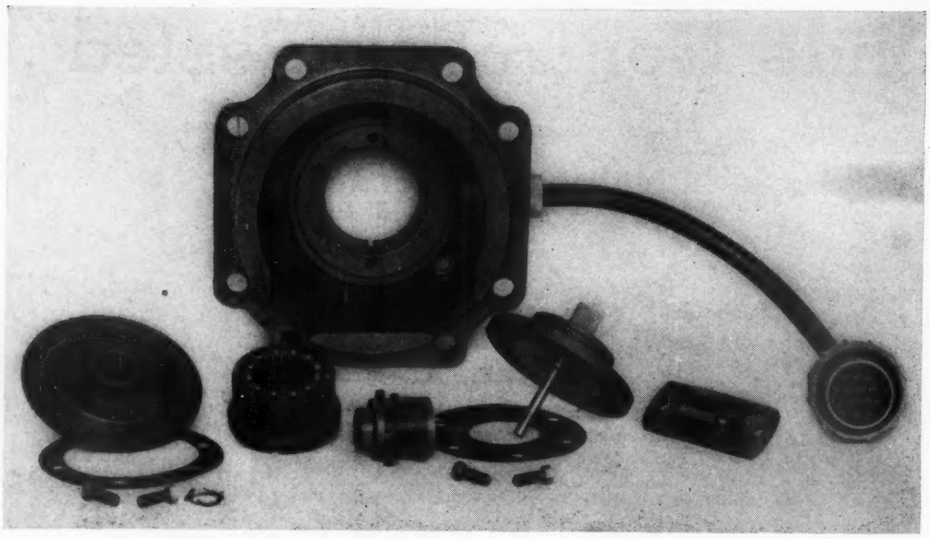
The function of the rotor is to rotate brushes in contact with a stationary commutator.

The part of the air-brake equipment which responds to the operation of the wheel controller, functions to reduce the brake-cylinder pressure rapidly on a particular truck when the wheel controller, by closing its actuating circuit, indicates slipping at one or more pairs of wheels on that truck. When the circuit is opened, indicating that the wheels are again rolling normally, this valve operates to restore the brake-cylinder pressure quickly to its former value. The slipping wheels may return to normal rolling before the pressure is completely exhausted from the brake cylinder. In that event, the exhausting of air from the brake cylinder will cease and the brake will be quickly reapplied to its normal pressure. If slipping reoccurs, the operation just described well be repeated as often as required to prevent the wheels from actually sliding on the rail.

A pressure switch connects the wheel-control apparatus to the 32-volt battery circuit of the car when the brake-cylinder pressure exceeds approximately five pounds. Thus the control equipment is in operation only



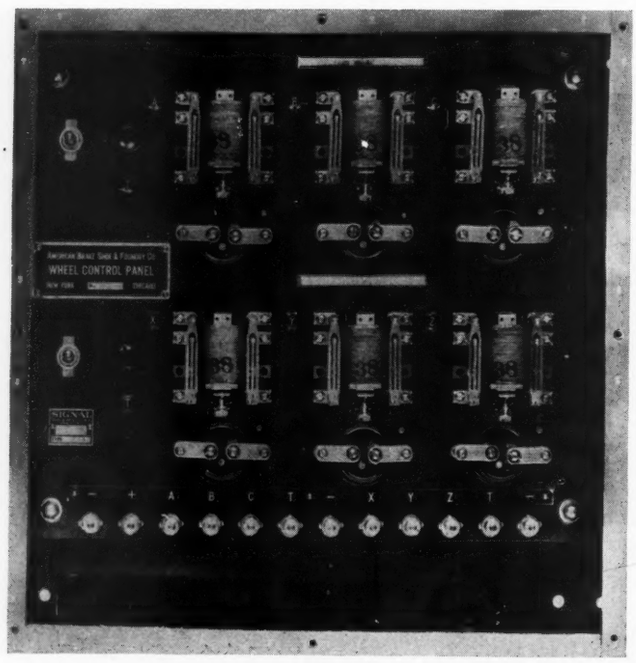
Left: A. B. S. Wheel-Control Axle Unit Bolted in Place on Timken Journal — Right: Controller Drive Plate Bolted to the End of the Axle



Individual Parts of the American Brake Shoe Wheel-Control Axle Unit

while the brakes are applied and there is a possibility of sliding wheels.

Since the brakes are reapplied within a fraction of a second after normal rolling of the wheels is restored, there is no appreciable loss in braking effort. In fact, the total braking effort may be increased, as a rolling



A. B. S. Control Panel for Two Four-Wheel Trucks—The Panel Is Mounted at a Convenient Location in the Car

wheel can transmit a greater retarding force to the rail than while sliding.

The control panel is mounted at a convenient location in the car and is equipped for controlling wheel sliding at two four-wheel trucks. Although the necessary relays for two trucks are mounted on the same panel, the circuits for each truck are separate.

General Description of Operation

The American Brake Shoe controller indicates slipping of wheels by passing direct-current circuits through the associated axle units to operate selectively slow-to-release relays when the wheels assume certain relative positions. The two slow-to-release relays required to control two pairs of wheels each operate to close a separate opening in a circuit which actuates the brake-control relay for that truck. A simultaneous closure of these openings is required to effect a slip control. A circuit passes through the rotors and commutators of the associated axle units operating one of the slow-to-release relays when the pairs of wheels and their respective rotors are in a certain relative position. The other slow-to-release relay operates when the wheels have rotated relative to each other 180 deg. from that position. Each slow-to-release relay remains operative for a predetermined time after the wheels have rotated out of the relative position that caused its operation. When the wheels slip, they rotate rapidly in relation to each other, and the second slow-to-release relay operates within a time less than that required for the first relay to release. This simultaneously closes both openings in the circuit to the control relay and a slip indication is transmitted to the brake apparatus.

While the wheels are rolling normally on the rail, any relative rotation between the pairs of wheels is comparatively slow. Under this condition, each slow-to-release relay releases before the other relay becomes operative and no simultaneous closure of the two openings in the control circuit occurs. In the absence of slipping wheels, the brake is operated without influence from the controller.

Service and Test

This method of detecting wheel slippage lends itself readily to service tests in the yard, since it is not necessary for the train to be in motion to check the operation of these circuits. A quick check may be made by replacing the rotor at one of the axle units, with a test rotor which may be turned in relation to the rotor at the other pair of wheels. With the brakes applied, a slow rotation of the test rotor, simulating normal crawl of the wheels while the train is operating, will not affect the brakes. However, a quick turn of the test rotor through 180 deg. should cause a prompt release and re-application of the brakes. A direct check of the circuits themselves may be made by merely ringing out the circuits with the usual equipment used by repairmen to check electrical circuits.

The parts required for an axle unit may readily be disassembled by removing six cap screws so that in case of necessity any part may be easily replaced.

R. W. Brown Elected Lehigh Valley Head

Operating vice-president of Reading-C. N. J. succeeds A. N. Williams as President

Revelle W. Brown

REVELLE W. BROWN, vice-president (operations and maintenance) of the Reading and its affiliated Central of New Jersey since December, 1935, was elected president of the Lehigh Valley at a special meeting of the board of directors held in Philadelphia, Pa., on July 9. He succeeds Albert N. Williams, who was elected president of the Western Union Telegraph Company on June 17 (see *Railway Age* for June 21, page 1105) and tendered his formal resignation as Lehigh Valley president on June 25. Mr. Brown will take over the duties of his new office effective July 14.

He comes to "The Valley" from a pair of roads which resemble it greatly in location and traffic. Like the "Route of the Black Diamond," the Reading and Central are among the so-called anthracite roads, built originally to carry the once extremely profitable traffic of the hard coal fields to the Eastern seaboard and northern New York and Canada. Made relatively wealthy by this traffic, they sunk the profits from coal into new lines and terminals to become among the most intensive and well-rounded transportation machines in the country. While the Lehigh Valley does not experience the heavy suburban passenger traffic which the Reading and Central carry in and out of Philadelphia and New York, respectively, and its through passenger services are less intensive in character, its freight business shows great similarity. To counteract the erosion of anthracite tonnage by substitution of West Virginia bituminous coal and fuel oil in former markets and the inroads of so-called "truck" mines—both "bootleg" and legal—it has endeavored over the last 20 years to build up a high-class merchandise traffic by fast trains, convenient schedules and relationships with connecting roads at the Niagara gateway.

Problems of the L. V. and Reading-C. N. J. are much the same. Both systems require large land holdings for their operations in New Jersey, which subjects them to confiscatory state taxes at least three times higher in relation to revenues than those of any other state in the union. In fact the present reorganization of the Central under Section 77 and complete effectiveness of the Lehigh Valley's voluntary plan of financial adjustment must await the outcome of extensive litigation and political battling over withheld taxes and future assessments. Both systems lie in heavily congested commercial and industrial areas where short-haul and l. c. l. traffic are a big portion of the traffic offered. Hence truck competition is especially keen, and it must be met under the handicap of many freight stations and yards on expensive urban land.

The road which Mr. Brown will head differs from those he leaves principally in that it is a terminal property to a far less extent, and competes actively with a great number of carriers on long-haul traffic. In the consolidation negotiations of the last decade, for example, the Lehigh Valley was sought after by larger trunk lines like the Pennsylvania as a main New York-Buffalo route, to comprise part of a complete Eastern system. The Reading-Central of New Jersey, on the other hand, were, in the opinion of most parties (including the management of the Reading itself), more valuable as terminal properties serving New York and Philadelphia and open to all connections.

Mr. Brown—who is 57—started railroading at the bottom of the ladder and has spent almost all of his time in the operating department. His entire career has been with the Baltimore & Ohio and the Reading-C. N. J., all of which roads are intimately related by joint operations, traffic agreements and management interlockings.

The new Valley president is a specialist in labor relations. For a number of years he has been one of the six members of the Executive committee of the Bureau of Information of the Eastern Railways, which serves as spear-head and clearing house for the important Eastern roads in wage discussions and matters before the National Railroad Adjustment Board. He also heads the committees appointed by the Eastern Railroad Presidents' Conference to treat for the carriers on a regional basis in conferences on the pending demands of the 14

(*Continued on page 60*)

From Panama Canal to Railways

Transfer of American Ships to British convoy transport causing shortage of bottoms in intercoastal service

SO great has been the transfer of American ships to British service that intercoastal service through the Panama Canal is now experiencing a serious shortage of vessels. As a result, the transcontinental railroads are being called upon to handle large amounts of freight that heretofore moved by water. This condition has been accentuated by the recent addition of traffic created by shipbuilding and other defense projects on the Pacific Coast which are requiring large tonnages of iron and steel and other materials that originate in the east and middle west.

Railroads Notice Effect of Ship Transfers

The effect of the transfer and sale of ships and the demand for war materials first became noticeable in the summer of 1940 when transcontinental railroad carloadings, particularly on the Pacific Coast, began to show larger increases than those of the railways as a whole. The traffic of the Southern Pacific, measured in ton miles, in that year, for illustration, was the largest in the company's history, due to a very appreciable extent to traffic diverted from the Panama Canal. In 1940 this railroad handled 17,528,216,020 ton-miles of freight, as compared with its former record of 16,485,032,008 ton-miles in 1929 and 15,393,287,960 ton-miles in 1939. In contrast, the ton-miles handled by all Class I railroads in 1940 was only 81 per cent and in 1939, 75 per cent of that in 1929. This record of the Southern Pacific was due to the fact that the average haul per revenue ton increased from 258 mi. in 1929 to 340 mi. in 1939 and to 363 mi. in 1940. Other transcontinental railroads had similar experiences. The average haul on the Atchison, Topeka & Santa Fe increased from 376 mi. in 1939 to 435 mi. in 1940; that of the Northern Pacific, from 328 mi. in 1939 to 343 mi. in 1940; and that of the Union Pacific, from 493 mi. in 1939 to 515 mi. in 1940.

By April, 1941, the transfer of ships from intercoastal service was definitely reflected in the tonnage moving through the Panama Canal. During the first three months of 1941, according to the report of the governor of the Panama Canal, the total tons of cargo passing through the canal in both directions declined to 5,703,879 tons as compared with 6,740,949 tons in the same quarter of 1940 and 7,264,391 tons in the same quarter of 1939. Intercoastal traffic, which is included in the above total, declined to 1,664,131 tons in the first three months of 1941, as compared with 1,900,717 tons in the same quarter of 1940 and 1,815,685 tons in the same period of 1939.

The shortage of ships is the result of the sale of United States vessels to other nations, the transfer of U. S. vessels to foreign registry and the government's purchase of privately owned ships. At the start of this abnormal movement of our tonnage to foreign flags, we had under American registry 1,366 vessels of 2,000 gross tons and over, totaling 8,098,300 gross tons, excluding vessels of the merchant type in Great Lakes, Philippine Island and Government service. During 1939 and 1940 the United States Maritime Commission approved the sale and transfer from the American merchant marine to foreign flags and registry, of 239 vessels of more than 2,000 gross tons each and aggregating 1,288,705 gross tons. Counteracting the sales to other maritime nations, we built 53 vessels in this category with a total of 444,703 gross tons in 1940, and 28 vessels of 241,052 gross tons in 1939, a total of 685,755 gross tons constructed, compared with the 1,288,705 gross tons transferred. In the latter part of April it was estimated that about one-third of the coastwise tonnage of ships had been withdrawn.

The early transfers of ships were dwarfed on April 30, 1941, when President Roosevelt issued an order calling for the immediate pooling of 2,000,000 tons of merchant shipping to expedite national defense and aid Great Britain in winning the battle of the Atlantic. The program has two phases: (1) to arrange for the utilization in routes to the combat zone of foreign ships or ships which are to be transferred to foreign registry and (2) to reallocate ships of our own flag, including those which will be completed in the next few months, in such a way as to make every cargo directly or indirectly useful to our defense efforts.

This order had an immediate effect upon intercoastal shipping for the Maritime Commission, a few days later, called upon intercoastal steamship operators to contribute 50 per cent, or about 50, of their large cargo vessels to the 2,000,000-ton shipping pool. The operators, on May 13, agreed to turn over 20 ships within 30 days and 20 more by mid-July. This action was followed later in May by the diversion to Great Britain of 50 tankers that had been hauling oil from the Gulf coast to Atlantic ports. On June 4, the commission ordered half of the ship tonnage of the 14 Atlantic and Gulf of Mexico coast line ship operators to be made available to Great Britain. It was estimated that between 60 and 70 merchant ships were involved. At the same time it announced a list of 28 other merchant vessels, among them, some of the finest in the American merchant marine, which had been requisitioned for the United States army and navy.

As a result of ship transfers, the 113 freighters that were in intercoastal service on December 13, 1940, had been reduced to 96 on April 30, 1941, and to about 50 at the present time. In addition, the 12 tankers that were in intercoastal service on January 1, 1941, have been reduced to 6.

Railroads Are Handling the Traffic

This curtailment of canal traffic, coupled with other shipping conditions precipitated by the war, has thrown a large transcontinental tonnage upon the railroads. Even before ship transfers had become sizeable, much of the materials needed for defense construction on the Pacific Coast were routed across the country by rail rather than by the Panama Canal because of the time element. With the present shortage of intercoastal ships, a larger portion of these materials is being carried by the railroads.

At the present time, the shortage of ships has diverted much of the intercoastal tonnage of the Panama Canal to the railroads. Should the canal be closed entirely, as has

been rumored, the total diversion would approximate the intercoastal tonnage that moved through the canal in 1940. In that year 7,714,337 tons of cargo, the equivalent of 220,000 cars of freight were handled in intercoastal service. Of this amount 2,795,708 tons, the equivalent of about 80,000 cars per year or 220 cars per day, moved from the Atlantic to the Pacific and 4,918,629 tons, the equivalent of 140,000 cars of freight per year or 390 cars per day, moved from the Pacific to the Atlantic.

In addition to the traffic diverted from intercoastal service, the railroads are also being called upon to handle other steamship tonnage that formerly moved via the canal. Ships are now discharging cargo at Pacific ports so that more of their time can be utilized in trans-Pacific service, and a large part of this tonnage is also moving across the country by rail. In 1940 a total of 19,584,679 tons of cargo, the equivalent of 559,560 cars of freight, exclusive of the 7,714,337 tons of intercoastal cargo, referred to above, moved through the Panama Canal. Forty-five per cent of it was carried in United States ships and 19 per cent in British ships. It is estimated that much more of this ocean traffic will be diverted to the railways when these ships are transferred.

Many Well Known Ships Transferred

Among the ships that were formerly in intercoastal service and that have been transferred or sold are the Munmotor of the Munson Line, eight passenger and cargo vessels of the American Merchant lines, the President Harding of the United States Lines, the President Fillmore, the President Lincoln, the President Wilson and other ships of the American President Lines, and ships of the Grace Line, the American-Hawaiian Steamship Company, the Lykes Bros. Steamship Company, the Matson Line, the American South African Line, the Pacific Atlantic Steamship Company, the Black Diamond Line, the Arrow Line, the Calmar Line, the Isthmian Steamship Lines, the Luckenbach Lines, the McCormick Steamship Company, the Weyerhaeuser Line, and the entire fleets of Swayne and Hoyt and the Newtex Steamship Line. Transfers and sales of ships also include tankers from the fleets of the Standard Oil Company of New Jersey, the Union Oil Company, the Standard Oil Company of California, the Texas Company, the Atlantic Refining Company and the Socony-Vacuum Oil Company.

In addition to these transfers and sales to foreign countries, the United States government has purchased a number of private ships for its own use. The S. S. Dixie, which the Southern Pacific had operated in passenger-freight service between New York and New Orleans, La., since 1928, was purchased for the Navy in January, 1941, because this ship was better adapted to proposed use in connection with the national defense program than any other ship of similar class. In February, 1941, the Southern Pacific also sold its S. S. El Valle, and its S. S. El Dia, used in its New York-New Orleans service, to the Atlantic Steamship Corporation, and in March it discontinued its steamship service between New York and New Orleans. In June it was directed by the Maritime Commission to turn over to the government its entire fleet of 10 vessels which it for many years operated as the Morgan Line between New York-Baltimore and Galveston-Houston.

Railroads Can Handle Canal Traffic

Estimates of the amount of traffic that the railroads would be called upon to handle should the Panama Canal be closed vary, but even the highest does not present a difficult problem for the railways. The Association of American Railroads recently estimated that if the canal is closed, only 319,164 carloads of freight (27.5 tons per car) would be diverted to the railways. This traffic, 875 carloads per day could be transported across the continent with a pool of 33,600 cars. The intercoastal tonnage, the association estimated, could be handled with a pool of 17,000 cars.

Unitloader Developed for Use in Freight Cars

THE Evans Products Company, Detroit, Mich., has recently developed special equipment for application in conventional box cars which is designed to assure greater safety of shipments, increased simplicity and economy in loading any and all types of merchandise, and to eliminate the old, slow and costly bracing dunnage, the freight charges on the heavy dunnage and the sawing, cutting and fitting required to apply the bracing. This new loading equipment, called the Unitloader, was under engineering development for more than three years before being placed in actual revenue service for a full year. During this year of testing, cars equipped with the Unitloader have been used extensively on both long and short hauls, carrying a wide variety of loads, with no instance reported of damage to goods in transit. These test loads, selected because they were difficult to handle, subject to excessive damage in transit, or not adapted to maximum weight loading in conventional box cars, included batteries, farm implements, passenger automobile axles, fenders or doors, cartoned space heaters and enameled water heaters in open crates.

Use of Special Tool to Take Up Load Slack, the Crossbar Then Being Locked in Place by Half-Turning a Socket Wrench Applied to the Lug Shown

The name Unitloader is derived from the fact that the use of this device permits shippers to determine the size of the load units, anything from a box or carton to a full carload being tightly and safely braced individually and on as many different levels, as desired. As shown in the illustration, the device includes permanent vertical members secured to the sides of the car. Longitudinal rails or wall members, which are attached to the vertical

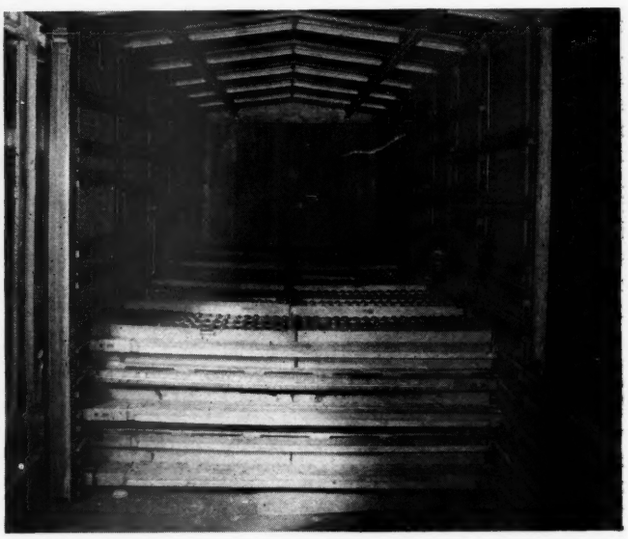
Unitloader Arranged for Triple-Deck Loading of Automobile Doors

members of the cars and may be raised or lowered to any desired elevation between the floor and the ceiling, support sturdy cross members easily adjustable at ½-in. intervals the entire length of the car so as to brace the particular load being carried. When desired, it is also possible to divide the car lengthwise from floor to ceiling.

The cross beams are of Z-bar steel construction, shod with wood. All packages rest against these wood surfaces. An expansion joint on each cross beam allows for variable car widths and each cross-beam end is held securely in place by a locking device which may be easily locked or released by one-half turn of a socket wrench applied to a lug. Slack in the load may be taken up by a special tool, illustrated, which gives a strong leverage on the cross bars, working against the racks on the horizontal side bars. Like all other parts of the Unitloader, the locking mechanism is designed to withstand hard usage. Details of the equipment design were carefully studied with a view to eliminating all unnecessary weight.

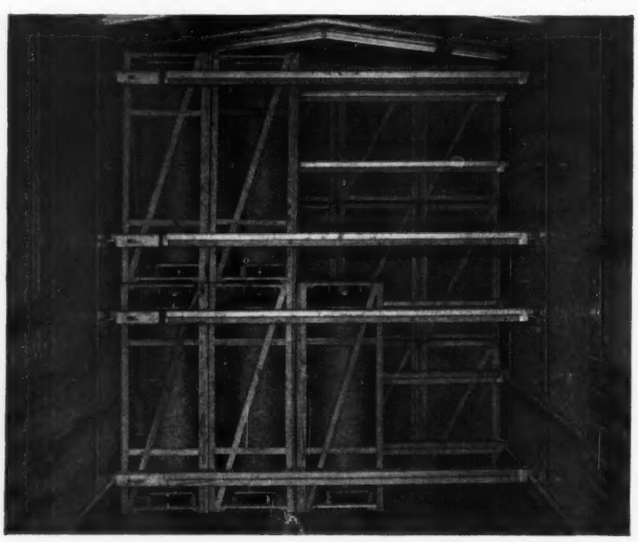
Many types of package shipments permit only light loading of freight cars, and it is reported that, in some instances, the payload weight was doubled in the Unitloader car owing to the possibility of carrying multiple-deck loads, each supporting only its own weight of merchandise, safely and securely locked in place. One of the most important features of the Unitloader is that by quick, easy adjustment of the cross members, tight loading is made possible in minimum time without slack. The cross beams are placed tightly against the load and locked securely in place, preventing movement of the load in any direction until the cross brace is unlocked by a quick half-turn of the wrench.

It is claimed that the Unitloader will effect an approximate maximum saving in dunnage of $150 per car, while the average saving on all loads will be about $50 per load.



Triple-Deck Loading of Automobile Storage Batteries Comprising 90,000 lb. of Pay Load as Compared with 40,000 Lb. Usually Carried in Conventional Cars

Some additional advantages attributed to the device include a substantial decrease in loading and unloading time, less damage to car interiors from the application of wood blocking and bracing and greatly reduced freight damage claims.



Mixed Loading of Cartoned Space Heaters and Enameled Water Heaters

R. W. Brown Elected Lehigh Valley Head

(*Continued from page 57*)

non-operating unions for paid-vacations and for a 30 per cent wage increase by these unions and the five brotherhoods. In 1937 Mr. Brown was a member of the 14-member Carriers' Conference Committee which represented the nation's railroads in negotiations respecting wage-increase demands by the "Big Five."

R. W. Brown was born August 5, 1883, at Carlyle, Ill. After attending public schools and Carlyle high school, he entered railroad service July 19, 1901, on the Illinois division of the Baltimore & Ohio as a laborer. Fifteen months later he was made a fireman and in November, 1905, a locomotive engineer. Five years later Mr. Brown was an air-brake instructor for the road at Cincinnati, Ohio. Later the same year, he was made assistant road foreman of engines, Illinois division. After several further positions in the motive power field he was appointed trainmaster, Wellston division, in June, 1915, later serving in that capacity on the Toledo division. On October 1, 1917, he was promoted to assistant superintendent, Ohio division, and two years later, superin-

tendent thereof. After serving on the Connellsville and Cumberland divisions in the same capacity, on January 20, 1926, he was made general superintendent of the Maryland district. On December 1, 1930, Mr. Brown was appointed general manager, Central of New Jersey, at New York, and six months later was made also a vice-president. On December 27, 1935, he was appointed vice-president in charge of operation and maintenance, Reading and Central of New Jersey, which position he has held up to his election as Lehigh Valley president. Mr. Brown is currently vice-chairman, Operating-Transportation division, of the Association of American Railroads.

The Cause and Cure of Rough Handling*

LARGE strides have been made in the mechanization of car loading and stowing and terminal operations; but one cannot mechanize a man's brain, and rough handling is still the result of man failure, in the great majority of cases. There is much that can be done to eliminate rough handling, but little or nothing can be accomplished by the superintendent who does not realize first and foremost that the human factor is the key to the whole problem.

The cost of claim payments, because of damage arising from rough handling, is of considerable importance, but even more important is the critical attitude of both the shipper and consignee when properly-packed freight is found in damaged condition on arrival at destination. Damage to shipments also represents an economic waste and, in these days when every effort is being made to speed the national defense program, such waste is inexcusable. Naturally, the demands of the defense program call for prompt handling of all shipments, but not to the extent of damaging freight, which now, more than ever, consists of high-class machinery, motors and airplane parts, which are susceptible to damage under unduly rough handling.

Impact register tests, and other means of determining the "sore spots" where rough handling occurs most frequently, indicate that 95 per cent of the damage caused by rough handling is incurred at terminals. Therefore, your committee went to the source and asked the yardmasters in a large terminal what their opinions were. These form a part of the report.

A successful campaign to eliminate rough handling requires the co-operation of the entire operating organization and everybody must be impressed with his responsibility for stamping out this unnecessary carelessness. The place to begin is with the head of the local operating organization—the division superintendent. If he is the right sort of supervisor, he will know whether the men under his supervision are rough-handling conscious and so conducting their operations as to avoid it. He must also know that freight is being properly stowed by the freight house forces and that the various agents are taking care of their part of the supervision to see that this is done. Likewise, he must assure himself that the contract trucker who is picking up and delivering freight, is handling it to and from his trucks without rough handling.

The trainmaster should be in a position to know whether the employees under his jurisdiction are conducting their operations properly to avoid rough handling. This applies also to assistant trainmasters, yardmasters, assistant yardmasters, and, in fact, to the entire supervisory force. If these men, in the daily routine of work, fail to correct trainmen or switchmen who are handling cars roughly, they themselves are failing in one of their most important duties as supervisors. These men are and must be teachers of the men under them—what they have accomplished by teaching in the safety field can be applied to rough handling with equally good results. Each superintendent or other supervisory officer should take an inventory of himself to find if he is meeting the above specifications.

The road foremen of engines are important in any general campaign for eliminating rough handling. They should know that their enginemen are so operating trains on the road as to avoid unnecessary jolts and jars; also that enginemen on switch engines are handling cuts properly. Obviously, damage to lading in terminal switching is caused by cars being coupled together at an excessive rate of speed. Many conductors and trainmen seem to enjoy the sound of cuts banging into each other with a loud crash, and a favorite expression of the switch crews is: "The superintendent rode that cut." Yard service crews, including the enginemen, are frequently not properly trained or instructed as to the importance of handling cars properly, when switching both loads and empties.

The maintenance of equipment department must also do its job in seeing that proper equipment is supplied, that it is properly inspected and that necessary repairs are made so that cars will operate over the railroad to their destinations without mechanical failures.

As a result of our studies, we consider the following items of particular importance. If each superintendent will study and analyze these things, we should be able to do at least a little boasting a year from now as to what was accomplished in bringing the subject before the convention today:

1. Good Roadbed—Properly maintained.
2. Proper equipment—Properly maintained.
3. Proper loading and stowing.
4. Judgment of tonnage consistent with track grades, etc.
5. Prior classification to avoid unnecessary rehandling.
6. Proper handling of air brakes.
7. Use of standard signals and prompt action on same.
8. Careful and intelligent switching:
   - (a) On humps, cut cars off so they can be reasonably controlled.
   - (b) Keep knuckles open to insure coupling.
   - (c) Flat switching—Keep cuts down to 20 cars.
   - (d) Keep slack bunched as much as possible.
   - (e) Educate train and engine crews to reduce number of reverse moves to a minimum.
   - (f) Maintain tracks and grades in classification yards to properly judge and control speed.
   - (g) Test hand brakes on humps before starting cars.
9. On manually-operated humps, reduce grades and if possible resort to flat switching.
10. Properly educate new employees and constantly supervise all employees, impressing upon them the importance of careful handling.
11. Use frequent posters or illustrated talks.

Conclusions

1. This subject is now and probably will for a long time be of extreme importance, due to the many kinds of high class machinery such as motors, airplane parts, etc., being transported over relatively long distances in this country.

2. It is probably a subject that should be studied simultaneously by every railroad in the United States and a concerted effort made to eliminate damage to property of shippers in the hands of the railroads. It may be of sufficient importance for each railway to organize a rough handling campaign at every terminal on its line,

* From a report presented at the annual convention of the American Association of Railroad Superintendents by a special committee of which J. F. Shaffer, superintendent terminals, Chesapeake & Ohio, was chairman.

similar to the campaigns that have been conducted for a number of years in connection with the safety movement.

3. It is not believed that much will be accomplished by a sporadic campaign on behalf of a few railroads, widely scattered over the country while the remainder give little or no consideration to the subject.

4. An intensive campaign should be instituted and fostered by members of the association and so recommended to the chief operating officers. They, in their official capacity, are best qualified to produce the desired results.

New Books...

Proceedings of the American Railway Engineering Association for 1941. 1,158 pages, 6 in. by 9 in. Bound in cloth and half Morocco. Published by the Association, 59 East Van Buren Street, Chicago. Price—cloth $8; half Morocco $9.

This volume contains the complete record of the activities of the association for the year ending with the annual convention last March, and includes the reports of the 26 standing and special committees and the discussions that followed their presentation at the convention. The wide variety of subjects, 130 in number, covered by the reports include practically every phase of railway engineering and maintenance; the results of a number of studies which have been made along lines of original research; many problems of operation, especially as operation is affected by facilities; and numerous studies of the economics of railway location maintenance and operation. Because of its wide scope, the volume is of value equally to maintenance, engineering and operating officers. Substantially all of the reports represent the result of several years of intensive study on the part of the respective committees, and it is this thorough study on the part of the committees that has given the proceedings of this association their high standing in engineering literature.

Obviously, it is not possible to mention in detail all of the reports. Among the outstanding features, however, are a discussion of freight train resistance under various conditions of train loading and speed; a proposed specification for the manufacture and installation of hand-operated grain-hopper scales; a discussion of methods for removing silica from boiler feed water; and a tentative specification for the design of wood bridges and trestles for railway loading. One report presents various phases of the problem of the college man in railway service. Another discusses various types of power equipment in maintenance of way work. Two reports include a series of studies in track and rail. A fifth report gives statistics on ties per mile of maintained track; while a sixth contains studies of service records for treated ties. A seventh report discloses the progress of the joint investigation of fissures in rails; and still another discusses stresses in track. Other valuable features relate to the economics of railway labor; statistical data on rail failures; current information on cement, concrete and concrete masonry and specifications for lining tunnels, for concrete culvert pipe and for pressure grouting to consolidate masonry; and a reprint of the report of the Joint Committee on Concrete and Reinforced Concrete.

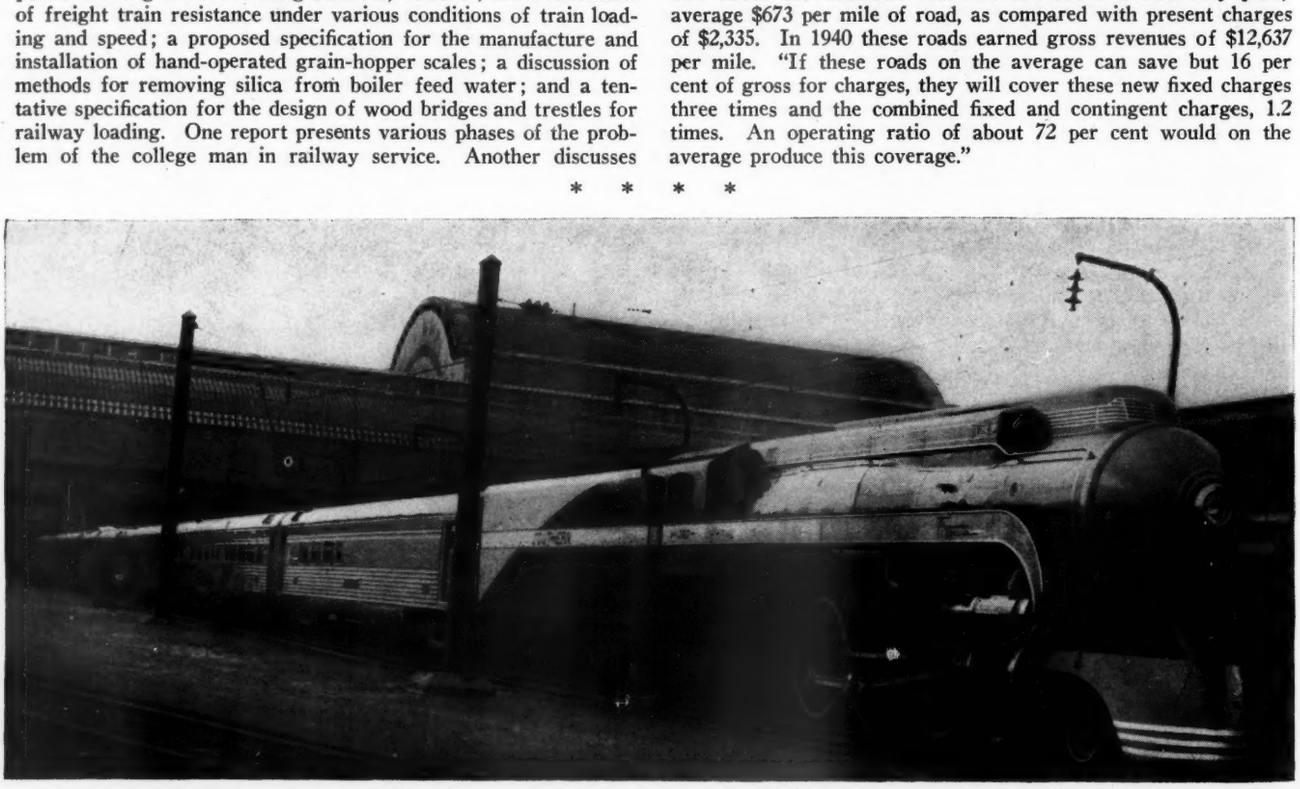
Guide to Railroad Reorganization Securities (third issue), compiled by Patrick B. McGinnis. 14 in. by 8½ in. Published by Pflugfelder, Bampton & Rust, New York. Price, $5.

This handbook performs valuable service in placing pertinent information on roads defaulting on their bonds in form for quick comprehension. Covering in all 34 major Class I roads now in receivership, in trusteeship under Section 77, having bonds in default or having reorganizations recently completed and new securities or their equivalents issued, the study presents four-page descriptions of the plans of 23 major roads. Of these, six have been consummated; seven have been approved by both the I. C. C. and the courts; five have been approved by the I. C. C. and the remainder await approval from both. To each of eleven roads without plans, a page of significant facts is devoted.

Particularly valuable for quick comparison of plans and roads is a special table insert listing all roads in default and presenting such analytical figures as ratio fixed debt (present and proposed) to gross revenues, fixed charges per mile-of-road, etc. To this third edition of the guide there have been added detailed maps of each system covered prepared by the R. F. C. Also, in the appendices are reprinted three articles, as follows: "Progress and Delay in Railroad Reorganizations Since 1933," by F. D. Dembitz; "The Relative Treatment of Securities in Railroad Reorganizations under Section 77," by H. J. Friendly and L. M. Tondel, Jr.; and "Capital Funds," by J. R. Warner.

The editor's introduction points out that new fixed charges proposed for the 20 roads with advanced plans (excluding the two under the Chandler Act and one under a voluntary plan) average $673 per mile of road, as compared with present charges of $2,335. In 1940 these roads earned gross revenues of $12,637 per mile. "If these roads on the average can save but 16 per cent of gross for charges, they will cover these new fixed charges three times and the combined fixed and contingent charges, 1.2 times. An operating ratio of about 72 per cent would on the average produce this coverage."

* * * *



The Southern's New Streamliner "Tennessean" Is Here Shown at Union Station, Washington, D. C., Before Its Departure for Memphis, Tenn. Steam Locomotives Like This Power the Train Between Washington and Bristol, Tenn., via the Norfolk & Western. Diesel-Electrics Haul the Train Beyond

NEWS

Sees Million-Car Week at Fall Peak

I. C. C. predictions given to Senate committee recently by Eastman and Johnson

The Interstate Commerce Commission believes that the railroads may be called upon to carry 1,000,000 carloads weekly during the coming fall. This opinion was expressed by Interstate Commerce Commission Chairman Joseph B. Eastman and Commissioner J. Monroe Johnson during Senate hearings on the second deficiency appropriation bill, which were made public this week.

The I. C. C. officials testified in support of a request for $220,000 for emergency car service work and $176,560 for regulation of water carriers. Later, the Senate appropriations committee recommended and the Senate and House approved only $110,000 for the expansion of the car service work and $150,000 for the water carrier regulation work.

Chairman Eastman explained to the committee that the commission has broad powers to deal with congestion in railroad traffic. "We want to be ready for the exercise of those powers," he continued, "because it is apparent that the transportation situation is going to be very tight. The railroads have been doing a splendid job so far. They are endeavoring to do what was not done at the time of the last war, and that is to keep the cars rolling and prevent their use for storage purposes."

He also pointed out to the committee that the commission had found that its field agents are "very useful, because, while the railroads themselves are working on these matters all the time, there are shippers who respond more readily to something that a government official tells them than they do to what they are told by the railroads."

At one point in the hearing Senator Thomas, Democrat of Oklahoma, asked Mr. Eastman whether the car shortage was "acute."

"No," replied Mr. Eastman. "It is not yet acute, but that point seems rapidly to be approaching."

Commissioner Johnson took up where Mr. Eastman left off in his testimony, declaring that the commission feels that there will be about 1,000,000 carloads a week this fall. "We still believe," he asserted, "that if the Association of American Railroads and we do our full duty we can handle close to 1,000,000 cars a week. But it will be close and very difficult, and every car must be unloaded promptly, and no man can get more cars than he needs. . . . We know that 1,000,000 cars a week is going to have everybody on his toes."

Commenting on the requested appropriation for the Bureau of Water Carriers, Chairman Eastman told the committee that the commission felt that the amount was small for the purpose. It was, he said, far less than the commission spends for the regulation of railroads or motor carriers.

Bills in Congress

Representative Jonkman, Republican of Michigan, has introduced H. R. 5230 to amend the Motor Carrier Act "to give shippers the right to designate the routing of shipments by motor vehicle in certain cases."

Senator Smathers, Democrat of New Jersey, has introduced S. 1723 "to provide for the establishment of a Federal Toll Road Board and Commissions authorized to construct, maintain, and operate toll roads, bridges, tunnels, and other facilities required for the development of a practical system of toll roads integrated with free highways throughout the United States. . ."

C. P. R. Officer on Canadian Labor Commission

George Hodge, manager of the Department of Personnel, Canadian Pacific, with headquarters at Montreal, Que., has been named one of the three members of an Industrial Disputes Inquiry Commission by the Canadian Dominion government. Together with Humphrey Mitchell, an executive member of the Labor Trades Congress, and Gilbert Jackson, a banker and economist, Mr. Hodge's duty will be to study labor disputes in their initial stages and make recommendations as to whether conciliation boards should be appointed. In each instance, the new commission will set to work as soon as a dispute arises.

Railroad Credit Corporation Makes Distribution

The Railroad Credit Corporation will make a liquidating distribution on July 31 of one-half of one per cent of the Fund as of June 30, amounting to $367,304, according to an announcement by E. G. Buckland, president.

Of this amount $316,552 will be paid in cash and $50,752 will be credited on carriers' indebtedness to the Corporation. This, said Mr. Buckland, will bring the total amount distributed to $62,074,528 or 84½ per cent of the original Fund contributed by carriers participating in the Marshalling and Distributing Plan, 1931. Of this total, $34,021,851 will have been returned in cash and $28,052,676 in credits.

Rates and Prices on Farm Products

Survey holds problem can't be viewed from freight rate angle alone

The problem arising out of the relationship between fluctuating prices on agricultural products and relatively rigid freight rates on such commodities "is as much one of price policy as of rate-making policy," and it cannot be approached from the freight-rate angle alone, according to a study of "Trends in Railroad Traffic, Freight Rates, and Prices, Perishable Agricultural Commodities, United States," which has recently been completed by Clifford C. Matlock, assistant transportation economist of the Department of Agriculture's Bureau of Agricultural Economics. The study is described in its foreword as a "non-technical sequel" to the report by the same author on index numbers of freight rates on perishable agricultural shipments, which was reviewed in the *Railway Age* of March 22, page 534.

Among other findings, Mr. Matlock's study disposed of the suggestion "recently to the fore" that "railroad freight rates should be linked to destination prices of agricultural products in such a way that the ratio between the rate and price levels would be constant." The ability of the railroads to vary rates in the manner suggested "cannot be taken for granted," he said, adding: "Railroads have many rigid costs that must, like the costs of farmers, be met in bad years, as well as good. Reduced returns and rigid costs mean financial embarrassment in such times for railroads as well as for others. Any plan to make agriculture's transportation costs flexible by introducing flexible railroad freight rates would have to include plans for making the costs of the railroads flexible too. In view of wage and other expense rigidities, this obstacle appears insurmountable." Later on, Mr. Matlock coupled the latter with another "outstanding" obstruction, found "in the freedom from regulation of motor truck freight rates on the bulk of agricultural traffic so carried."

The study as a whole is divided into two general parts—a survey of the perishable traffic and how it moves, and the discussion of freight charges, prices and the farmers' problems in connection therewith. Included are various statistical tables showing traffic and freight-rate trends. The data on traffic trends show "that the rail-

(*Continued on page 71*)

Preferential Status for Loco. Materials

OPACS also issues program covering urban and inter-urban passenger cars

Action "to relieve a critical shortage of locomotives of all kinds" was taken by the Office of Price Administration and Civilian Supply on July 7 when it made public an allocation program "giving preferential delivery status" to materials and equipment essential to locomotive construction. On the same day, OPACS also acted "to secure adequate transportation facilities for the traveling public," issuing another allocation program providing preferential status on materials and equipment used in the construction of cars and buses "for urban or interurban lines."

The locomotive materials program set forth that "there is a critical shortage in the nation's locomotives"; it is applicable to material and equipment entering into "railroad, mine and industrial locomotive construction—steam, electric or Diesel." Likewise the program in connection with passenger equipment for urban and interurban lines was based on a finding that "there is a critical shortage in the nation's coaches and rail-cars." These latest moves place the equipment involved in the same OPACS class as the materials for freight car construction covered in a previous allocation program issued June 10, as noted in the *Railway Age* of June 14, page 1085. In other words, as it is stated in the locomotive program, "all deliveries of material and equipment necessary for the construction of locomotives shall be given preference over all material and equipment going into any other civilian use, subject, however, to a prior preference to deliveries for all such material and equipment as may be required under contracts with the United States or any department or agency thereof."

Since OPACS' aforementioned June 10 action in their behalf, the freight car builders have been further aided by the June 19 action of the Office of Production Management. As noted in the *Railway Age* of June 21, page 1124, E. R. Stettinius, OPM director of priorities, on the 19th extended a limited blanket rating to 60 car builders to aid them in obtaining scarce materials. This week Mr. Stettinius followed through with a program to make OPM preference ratings effective. He announced that the recently-created Compliance Section "will investigate and take appropriate action in cases involving non-compliance or violation of priority orders."

While asserting that "efforts will be made to obtain voluntary compliance in all cases," Mr. Stettinius' announcement went on to warn that "punitive action can and will be taken if necessary, so that the great majority of producers, who cooperate freely and willingly, will not be penalized by the unfair activities of the few who refuse to cooperate." It will be the responsibility of the Compliance Section, headed by L. J. Martin, "to see that industry is well informed on compliance matters and to promote not only understanding but a willingness to comply." The Section will "control and supervise compliance cases arising through complaints from within OPM, from within the armed services, and from industry and the public."

Pacific Railway Club Changes Address

The Pacific Railway Club has a new address, effective July 1. Secretary W. S. Wollner may now be reached at P. O. Box A, Sausalito, Cal.

I. C. to Re-Equip Panama Limited

The Illinois Central plans to re-equip its Panama Limited operating between Chicago and New Orleans, La., with modern lightweight streamlined equipment as soon as it can be obtained. Each train will consist of a 4,000 hp. Diesel-electric locomotive, 10 Pullman Company sleeping cars and a baggage car, a dining car and lounge car owned by the railroad.

A. A. R. Cancels Special Car Order 43

Effective at once, Special Car Order 43 requiring that all plain box cars owned by railroads west of the Mississippi river be returned to that area at once for the handling of the wheat crop has been canceled, according to an announcement on July 9 by W. C. Kendall, Chairman of the Car Service Division of the Association of American Railroads. Details of the order, which was dated May 13, were given in the *Railway Age* of May 17, page 859.

Mr. Kendall said that as a result of the order some 39,000 cars had been returned to the Mid-Western carriers and that because of the fact that the wheat crop was being handled satisfactorily there was no need to continue the order in force. As a result of the cancellation of the order, cars will now be returned in the regular manner as provided by Car Service Division rules.

Pioneer Deluxe Coach Train To Cease Operation

The "Blue Comet," considered one of the first passenger trains in the country to provide luxury accommodations at standard coach fares, will cease operation on September 28, when timetables change from daylight saving to eastern standard time, by permission of the New Jersey Board of Public Utility Commissioners. Operated between Jersey City, N. J., and Atlantic City by the Central of New Jersey since February, 1929, the Blue Comet has suffered a progressive traffic decline since 1930, due principally to bus and private automobile competition.

The Central—which is in trusteeship—applied to the board for permission to discontinue the train on October 11, 1939, which request was denied. At that time the board suggested various measures by which it was hoped the volume of business on the train might be increased. The road renewed its petition this year, which the board granted. Total passengers carried on the train declined from a high of 56,746 in 1930 to 14,045 in 1940.

Chicago Meetings on Pay Increase

Meanwhile conferences on engineer and firemen demands break up

A committee representing the Western railways met with representatives of the five operating brotherhoods at Chicago on July 9 and with representatives of the 14 non-operating brotherhoods on July 10 to determine dates, places and methods of proceedure for conferences on the employees' demand for an increase of 30 per cent in basic pay. These meetings followed the serving of demands on individual railroads on June 10 and the rejection of the demands by the railroads during the ensuing 30 days.

While these individual demands were being considered during June, other conferences took place at Chicago between a committee representing the Western railways and committees representing the Brotherhood of Locomotive Engineers and the Brotherhood of Locomotive Firemen and Enginemen on the demands which the engineers made on March 18, 1939, and which call for rates of pay based upon horsepower of Diesel locomotives instead of weights on drivers and for an assistant engineer in the engine rooms of certain types of Diesel locomotives and the demands which the firemen made on May 10, 1941, and which involve higher pay on Diesel and coal burning locomotives and a fireman-helper on each unit of locomotives. These conferences broke up on July 3, due to the continued demands of the engineers and firemen for the employment of extra men on Diesel-electric locomotives.

"We see neither reason nor justice in the demands for the employment of additional and unneeded men on Diesel locomotives," said F. G. Gurley, chairman of the Western Carriers' Conference Committee. "The demands of the engineers and firemen would require, on a Diesel such as that used on the transcontinental City of San Francisco, the employment of seven enginemen—one engineer, three 'assistant engineers' and three firemen. This train is now being operated safely and efficiently, with two enginemen—one engineer and one fireman.

"The City of San Francisco, in its journey from Chicago to the Coast, runs over 15 so-called 'operating districts.' Engine crews are changed for each operating district. Thus, under the present demands, 105 enginemen would be required to handle the locomotive on a trip requiring only 39 hours and 45 minutes. In view of the fact that 15 engine crews are used in a period of less than 40 hours, it is obvious that these men, on the average, now work only between two and three hours a day; yet they receive a minimum of 8 hours' pay. The 105 men, who would be required under the present demands to handle this train in one direction, represent an increase of 75 over the present number required. All that these extra employees would do would be to ride, to draw their pay, and to increase the cost of rail transportation.

"We have been ready and willing, as a basis for disposing of these demands, to discuss with these men changes in the basis upon which their present daily rates of pay are established. We see no justification, however, for the employees to attempt to secure a wage increase through a change in the basis on which they are paid. This is particularly true when there are now before us demands for an increase of 30 per cent in pay on top of this other wage increase. In other words, the engineers and firemen are demanding a compound increase in pay—an increase on top of another increase.

"We have offered to attempt a disposition of these demands by a change in the present method of fixing rates of pay for engineers and firemen on Diesel-electric locomotives, but only upon a sound and reasonable basis, and not as a wage increase in disguise. The employees, however, have stated that no change in the basis of pay for operating Diesel-electric engines would cause them to withdraw their demands for the additional and unnecessary personnel.

"Certainly no group of railroad officers, with justice to themselves or to the people who are entitled to demand from them reasonably intelligent and courageous management of the properties entrusted to them, can agree to any such proposals."

Pacific Coast Fans Open Enginehouse for Old Locomotives

To house four historic locomotives in the possession of the Pacific Coast chapter of the Railway & Locomotive Historical Society, that organization opened the "West Berkeley Engine House" on June 26. Located on the property of the Southern Pacific, just opposite the freight office at West Berkeley, Cal., the enginehouse will shelter Virginia & Truckee locomotive No. 21 "J. W. Bowker"; V. & T. No. 13 "Empire"; North Pacific Coast No. 12 "Sonoma" and an old-timer titled the "Ogden."

P. R. R. Employees Form Guard of Honor for Sergeant York

Members of the Pennsylvania Railroad Post No. 599 of the Veterans of Foreign Wars, comprising employees of the road who have seen overseas military or naval service in wartime, formed a guard of honor for Sergeant Alvin C. York when he arrived at Pennsylvania station, New York, July 1, on board a through limited. The World War hero came to New York to attend the opening of the motion picture "Sergeant York," which is based on his diary.

President Signs Appropriation Measures

Congressional action has been completed and the President has signed the Independent Offices Bill, carrying appropriations for the Interstate Commerce Commission for the fiscal year ending June 30, 1942. He has also signed the Labor Department-Social Security bill which carries funds for the Railroad Retirement Board, the National Mediation Board and the National Railroad Adjustment Board.

Under the bills as passed the I. C. C. will get $9,058,750 for the present fiscal year. The Railroad Retirement Board's allocation is $144,000,000; while the National Mediation Board's figure is $155,500, and the National Railroad Adjustment Board can spend $221,440 during the current fiscal year.

G. M. & O. Discusses Car Situation

The Gulf, Mobile & Ohio, in a petition filed with the Interstate Commerce Commission this week seeking authority to assume liability for $2,175,000 of equipment trust certificates, details of which are given in the financial columns of this issue, found occasion to make some comments on the current equipment situation which is confronting the railroad industry.

After informing the commission that it desired to purchase 800 box cars, 150 hopper cars, and 50 automobile box cars, the company went on to say that "because of the defense activities there is a shortage of equipment of this kind developing throughout the country and it is expected that there will be a serious shortage unless the railroads hasten the acquisition of additional cars."

"Applicant," the petition continues, "now has difficulty and anticipates that in the future it will experience increasing difficulty in keeping a sufficient number of cars on its lines to comply with the requirements of shippers and perform its duty as a common carrier."

The carrier also told the commission that it has equipment sufficient to handle normal business but that the national defense program has brought about a substantial increase in the volume of traffic moving and it considers that it is its duty to provide itself with the facilities that will enable it to do its part in supporting the government's preparation for defense. "In taking this step," it concluded, "applicant is cooperating with the other railroads of the country."

P. R. R. to Expand Trackage Facilities in Washington

The Pennsylvania will expand its facilities in northeast Washington, D. C. by the addition of a $1,000,000 freight terminal trackage and hopes to begin the work right away, according to an announcement by J. Gilbert Nettleton, special representative of the road, who conducted the negotiations for the site. The company is acquiring 350,000 square feet of land at Florida Avenue and Fourth Street, northeast, abutting

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New Twin Travel Bureaus Opened in Grand Central

The New York Central and the New York, New Haven & Hartford opened new twin travel bureaus in Grand Central terminal, New York, the week of July 27. The upper photograph shows the exterior of the Central's bureau, located just off the main waiting room, while the lower view shows the interior of one of the twin bureaus. Both facilities are air-conditioned, soundproofed and equipped with indirect fluorescent lighting. They replace former quarters located in the north balcony of the terminal

the present right-of-way, for the new trackage, which will handle 200 cars.

Mr. Nettleton said that the railroad had outgrown its old freight terminal and that the addition will provide better service for Washington patrons. A tunnel will be constructed under New York Avenue for the tracks, which will fan out into the new yard.

Historical Bulletin Features Jervis Letters

Unpublished letters of John B. Jervis, early American railroad engineer connected with the Mohawk & Hudson, Delaware & Hudson and the Erie, among other roads, written between 1831 and 1836, feature Bulletin No. 55 of the Railway & Locomotive Historical Society, recently issued. Hitherto not available to the public, the letters constitute correspondence between a pioneer of American railroading and officers and directors of various early roads concerning technical details, especially comparisons between American and English practices. Other articles in the bulletin include a discussion of the original Hudson River station in New York; the Fall Brook railway (now New York Central) and an article on locomotives acquired by the Maine Central and constituent companies prior to 1900.

B. & O. Magazine Fetes Women in Railroading

The twelfth annual "Women's Number" of the Baltimore & Ohio Magazine, among other features in a heavy consist, contains an article presenting biographical sketches of women who hold important jobs on American railroads. Among women employees cited are a purchaser and assistant inspector in a roadmaster's office on the Northern Pacific; the assistant treasurer of the Alton & Southern; a traffic representative for the American Refrigerator Transit Company; a passenger representative for the New York Central; a purchasing agent for the Minnesota Transfer, a traffic department representative of the New York, New Haven & Hartford; a city passenger agent for the Chicago, Burlington & Quincy; an assistant to chief mechanical officer, Chicago & North Western; a counsellor, traveling public research, for the Erie; an engineer of service for the Baltimore & Ohio; and a traveling passenger agent for the Atchison, Topeka & Santa Fe.

Would Have Senate Committee Make Vehicle Size Study

Investigation by the Senate committee on interstate commerce of "the need for and desirability of federal regulation of sizes and weights of commercial motor vehicles" is called for in Senate Resolution 141 which has been introduced by Senator McNary, Republican of Oregon. Thus does the Senate's minority leader want to give to the committee the same job which the Interstate Commerce Commission has been working on for some time, the commission having received the original assignment in the Motor Carrier Act, 1935, and having been directed by the Transportation Act of 1940 to expedite its study.

The I. C. C. investigation, docketed as Ex Parte No. MC-15, has been proceeding under the general direction of Dr. C. S. Morgan, assistant director of the Bureau of Motor Carriers. During the latter part of 1940, the commission made public several preliminary reports which had been prepared by members of the staff of the Bureau of Motor Carriers from some of the material gathered in connection with the investigation. Publication of these preliminary reports was noted in *Railway Age* issues of September 7, 1940, page 337, and November 2, 1940, page 658.

The McNary resolution would direct the committee on interstate commerce to make its investigation "full and complete"; and to report to the Senate "at the earliest practicable date, the results of its investigation, together with its recommendations, if any, for necessary legislation." To carry out its assignment, the committee or any duly authorized sub-committee thereof would be empowered to utilize the services of government agencies, and to require by subpena the attendance of witnesses and the production of documents. The amount which the expenses of the committee shall not exceed was left blank in the resolution as introduced.

April's Net Income Was $7,263,578

Class I railroads reported for April a net income after fixed charges of $7,263,578 as compared with a net deficit of $8,990,217 in April, 1940, according to the Interstate Commerce Commission's monthly compilation of selected income and balance sheet items. The year's first four months showed a net income of $76,298,529 as compared with a net deficit of $20,880,049 for the first four months of 1940.

The roads not in receivership or trusteeship had a net income of $9,259,179 for April as compared with $2,565,092 for the same month of last year; while the net income for the first four months of this

SELECTED INCOME AND BALANCE-SHEET ITEMS OF CLASS I STEAM RAILWAYS IN THE UNITED STATES

Compiled from 132 Reports (Form IBS) Representing 137 Steam Railways
(Switching and Terminal Companies Not Included)

Income Items	All Class I Railways — For the Month of April 1941	For the Month of April 1940	For the Four Months of 1941	For the Four Months of 1940
1. Net railway operating income	$52,568,877	$34,120,522	$254,072,096	$150,024,092
2. Other income	10,257,659	10,967,442	42,683,478	44,787,607
3. Total income	62,826,536	45,087,964	296,755,574	194,811,699
4. Miscellaneous deductions from income	2,810,773	2,301,370	11,401,746	10,448,161
5. Income available for fixed charges	60,015,763	42,786,594	285,353,828	184,363,538
6. Fixed charges:				
6-01. Rent for leased roads and equipment	13,036,085	11,280,516	50,451,854	43,410,056
6-02. Interest deductions[1]	37,589,869	38,394,692	150,141,908	153,448,903
6-03. Other deductions	118,075	133,124	474,145	518,811
6-04. Total fixed charges	50,744,029	49,808,332	201,067,907	197,377,770
7. Income after fixed charges	9,271,734	d 7,021,738	84,285,921	d 13,014,232
8. Contingent charges	2,008,156	1,968,479	7,987,392	7,865,817
9. Net income	7,263,578	d 8,990,217	76,298,529	d 20,880,049
10. Depreciation Way and structures and equipment)	17,874,308	17,039,628	71,030,645	67,764,124
11. Federal income taxes	6,310,578	2,993,913	31,114,500	11,753,551
12. Dividend appropriations:				
12-01. On common stock	60,000	2,438,396	17,294,965	22,602,269
12-02. On preferred stock	764,781	764,781	5,209,076	5,265,416
Ratio of income to fixed charges (item 5 ÷ 6-04)	1.18	.86	1.42	.93

Selected Asset and Liability Items	All Class I Railways — Balance at End of April 1941	Balance at End of April 1940
13. Investments in stocks, bonds, etc., other than those of affiliated companies (Total, Account 707)	$560,796,866	$598,977,896
14. Cash	$673,832,122	$481,884,236
15. Temporary cash investments	71,455,665	50,701,216
16. Special deposits	123,313,940	96,329,268
17. Loans and bills receivable	1,771,422	1,781,640
18. Traffic and car-service balances—Dr.	26,910,949	23,304,484
19. Net balance receivable from agents and conductors	54,827,539	46,511,835
20. Miscellaneous accounts receivable	145,490,812	120,177,596
21. Materials and supplies	368,807,309	367,618,442
22. Interest and dividends receivable	17,875,491	20,614,706
23. Rents receivable	1,215,552	1,322,626
24. Other current assets	6,931,675	4,760,010
25. Total current assets (items 14 to 24)	$1,492,432,476	$1,215,006,059
26. Funded debt maturing within 6 months[2]	$95,583,395	$257,915,296
27. Loans and bills payable[3]	$77,455,048	$136,733,995
28. Traffic and car-service balances—Cr.	45,804,220	37,553,283
29. Audited accounts and wages payable	236,727,858	226,431,162
30. Miscellaneous accounts payable	49,076,004	58,617,308
31. Interest matured unpaid	35,424,149	26,400,163
32. Dividends matured unpaid	1,709,819	1,835,556
33. Unmatured interest accrued	80,751,773	82,508,820
34. Unmatured dividends declared	1,477,258	2,213,011
35. Unmatured rents accrued	26,580,718	27,257,408
36. Accrued tax liability	249,266,917	208,502,865
37. Other current liabilities	36,460,730	30,245,499
38. Total current liabilities (items 27 to 37)	$840,734,494	$838,299,070
39. Analysis of accrued tax liability:		
39-01. U. S. Government taxes	140,139,146	93,455,828
39-02. Other than U. S. Government taxes	109,127,771	115,047,037

[1] Represents accruals, including the amount in default.
[2] Includes payments of principal of long-term debt (other than long-term debt in default) which will become due within six months after close of month of report.
[3] Includes obligations which mature not more than 2 years after date of issue.
d Deficit or other reverse items.

NET INCOME OF LARGE STEAM RAILWAYS

(Switching and Terminal Companies Not Included)

Name of Railway	Net Income After Depreciation, For the Four Months of 1941	Net Income After Depreciation, For the Four Months of 1940	Net Income Before Depreciation, For the Four Months of 1941	Net Income Before Depreciation, For the Four Months of 1940
Alton	* $245,571	* $791,988	* $154,748	* $705,741
Atchison, Topeka & Santa Fe[4]	3,532,533	* 1,840,776	7,574,566	2,089,775
Atlantic Coast Line	4,087,328	291,233	4,873,733	971,394
Baltimore & Ohio	2,476,197	* 2,681,394	4,975,920	* 294,296
Boston & Maine	1,683,474	* 381,419	2,157,159	102,421
Central of Georgia[2]	63,044	* 1,007,094	351,094	* 721,890
Central of New Jersey[2]	* 1,117,005	* 1,893,596	* 677,116	* 715,894
Chesapeake & Ohio	6,887,023	9,829,101	9,742,617	12,640,023
Chicago & Eastern Illinois	504,522	* 608,817	710,512	* 407,203
Chicago & North Western[2]	* 1,663,534	* 5,877,890	* 53,736	* 4,228,666
Chicago, Burlington & Quincy	2,737,199	* 286,194	4,581,659	1,450,967
Chicago Great Western	294,887	* 413,495	483,360	* 226,656
Chicago, Milwaukee, St. Paul & Pacific[2]	166,693	* 4,338,532	2,186,383	* 2,373,926
Chicago, Rock Island & Pacific[2]	269,766	* 3,701,497	1,724,932	* 2,329,365
Chicago, St. Paul, Minneapolis & Omaha	* 753,239	* 1,148,520	* -572,985	* 959,184
Delaware & Hudson	608,713	216,493	990,715	567,768
Delaware, Lackawanna & Western	884,994	* 503,670	1,709,786	299,493
Denver & Rio Grande Western[2]	* 1,616,744	* 2,016,148	* 1,182,169	* 1,600,762
Elgin, Joliet & Eastern	1,828,493	693,311	2,238,652	1,006,520
Erie (including Chicago & Erie)[3]	1,662,826	* 1,508,527	2,892,660	* 301,507
Grand Trunk Western	754,854	107,377	1,144,616	503,669
Great Northern	* 1,395,939	* 3,003,008	37,517	* 1,778,405
Illinois Central	3,344,896	* 379,525	5,585,821	1,744,320
Lehigh Valley	820,002	* 788,188	1,487,601	* 90,381
Long Island	* 603,162	* 990,541	* 82,461	* 601,206
Louisville & Nashville	4,251,593	1,911,135	5,732,954	3,352,448
Minneapolis, St. Paul & Sault Ste. Marie[2]	* 2,350,316	* 2,208,495	* 1,924,322	* 1,799,610
Missouri-Kansas-Texas	* 672,909	* 1,328,915	* 288,105	* 926,562
Missouri Pacific[2]	* 968,777	* 4,692,252	533,485	* 3,195,163
New York Central[5]	6,824,352	* 1,459,674	12,870,019	3,836,552
New York, Chicago & St. Louis	2,590,061	485,054	3,142,147	1,014,611
New York, New Haven & Hartford[2]	765,171	* 2,109,562	1,874,324	* 1,011,473
Norfolk & Western	7,945,605	10,038,768	10,156,604	12,098,585
Northern Pacific	* 720,013	* 2,101,851	416,808	* 983,689
Pennsylvania	9,330,189	6,725,185	18,701,327	15,573,865
Pere Marquette	1,183,998	545,703	1,950,205	1,311,679
Pittsburgh & Lake Erie	1,503,637	834,706	2,300,619	1,563,979
Reading	2,630,239	1,405,445	3,641,890	2,443,501
St. Louis-San Francisco[2]	* 1,014,009	* 3,903,766	* 11,207	* 2,889,387
St. Louis, San Francisco & Texas	* 10,941	* 170,012	* 10,941	* 169,873
St. Louis Southwestern[2]	1,209,383	* 156,052	1,426,472	55,161
Seaboard Air Line[1]	579,521	* 1,023,094	1,391,165	* 252,867
Southern	4,400,522	399,454	5,625,432	1,575,693
Southern Pacific[6]	6,405,512	* 4,523,285	9,086,937	* 1,877,638
Texas & Pacific	851,324	334,881	1,273,484	738,592
Union Pacific (including leased lines)	2,302,944	1,865,245	5,006,333	4,382,141
Wabash[1]	482,385	* 1,481,862	1,205,895	* 763,252
Yazoo & Mississippi Valley	97,276	* 164,760	277,775	* 7,292

* Deficit.
[1] Report of receiver or receivers.
[2] Report of trustee or trustees.
[3] Under trusteeship, Erie R. R. only.
[4] Includes Atchison, Topeka & Santa Fe, Gulf, Colorado & Santa Fe, and Panhandle & Santa Fe.
[5] Includes Boston & Albany, lessor to New York Central.
[6] Includes Southern Pacific, Texas & New Orleans, and leased lines. The report contains the following information: "Figures reported above for Southern Pacific Transportation System exclude offsetting debits and credits for interest on funded securities and rentals for leased properties between companies included therein. Operations for 1941 of separately operated Solely Controlled Affiliated Companies (excluding results for Southern Pacific Railroad Company of Mexico), not included in above statement, resulted in a net loss of $348,984 for the month and $1,387,746 for the period. These results include $220,642 for the month and $873,187 for the period, representing interest on bonds of such companies owned by Southern Pacific Company not taken into income by S. P. Co., and, therefore, not included in the 1941 income results for the System reported above. The combined results for 1941 for Southern Pacific Transportation System and separately operated Solely Controlled Affiliated Companies (excluding S. P. R. R. Co. of Mexico) amounted to a net income of $1,826,752 for the month and $5,890,953 for the period. Figures herein given exclude results of Southern Pacific Railroad Company of Mexico for the reason that policy was adopted January 1, 1940 of making no further advances to that company, it being required to conduct its operations entirely within its own resources."

year was $82,351,684 as contrasted with $17,940,904 for the same period last year.

Seventy-five roads reported net incomes for April, while 54 reported net deficits; in April, 1940, there were 51 net incomes and 78 net deficits. For the first four months of this year 87 reported net incomes and 42 reported net deficits, as compared respectively, with 58 net incomes and 71 net deficits in the first four months of 1940.

The consolidated statement for all Class I roads and that showing net incomes or deficits of "large steam railways" are given in the accompanying tables.

Wheat Movement Rolling Along

The last ten days have been the crucial period in handling the winter wheat crop, as the Kansas harvest got into full swing. As predicted in the *Railway Age* of July 5, however, the railways are having no difficulty in performing this mass transportation job. Because of the careful preparations of the western roads, the co-operation of the eastern roads in returning western empties and the complete understanding and joint action between the railways and the grain trade as a whole, the movement is being made smoothly and completely without car shortages. The important Kansas City terminal was kept in fluid condition, even during the peak week, the record loading into that terminal this year being 1,800 cars in one day. While this is a large movement, it does not compare with the cars the terminal has been called upon to handle in one day in other years, for example, in 1931, when there were 6,500 cars of wheat in the Kansas City terminal in one day.

The co-operation of all concerned, plus the fact that unusually wet weather has caused the harvest to last longer and be less concentrated than in other years, has brought about this condition. So far in July, the wheat-loading railways have been handling an average of from 100 to 700 fewer cars of wheat per day this year than last, despite a materially larger crop. The average loadings for July this year are thus considerably under those of last year. This season, however, the wheat loadings did not take their customary violent drop following the peak week and it is estimated that heavy loadings will continue throughout the month, with the result that as much or more wheat will be loaded in July this year as last.

May Accident Statistics

The Interstate Commerce Commission on July 7 made public its Bureau of Statistics' preliminary summary of steam railway accidents for May and this year's first five months. The tabulation, which is subject to revision, follows:

Item	Month of May 1941	Month of May 1940	5 months ended with May 1941	5 months ended with May 1940
Number of train accidents	737	467	3,354	2,906
Number of casualties in train, train-service and nontrain accidents:				
Trespassers:				
Killed	227	186	735	673
Injured	158	176	664	665
Passengers on trains:				
(a) In train accidents*				
Killed	..	..	4	26
Injured	16	224	507	517
(b) In train-service accidents				
Killed	1	..	5	1
Injured	123	123	675	644
Travelers not on trains:				
Killed	..	..	1	3
Injured	64	61	375	375
Employees on duty:				
Killed	60	33	257	212
Injured	1,871	1,256	8,438	7,188
All other nontrespassers:**				
Killed	141	128	824	839
Injured	460	372	2,752	2,632
Total—All classes of persons:				
Killed	429	347	1,826	1,754
Injured	2,692	2,212	13,411	12,021

* Train accidents (mostly collisions and derailments) are distinguished from train-service accidents by the fact that the former cause damage of more than $150 to railway property.

** Casualties to "Other nontrespassers" happen chiefly at highway grade crossings. Total highway grade-crossing casualties *for all classes of persons, including both trespassers and nontrespassers,* were as follows:

Persons:				
Killed	125	115	758	769
Injured	283	241	1,950	1,958

June Employment 11.63 Per cent Above 1940

Railroad employment increased another 2.79 per cent—from 1,124,719 to 1,156,144—during the one-month period from mid-May to mid-June, while the June total was 11.63 per cent above that for June, 1940, according to the Interstate Commerce Commission's compilation based on preliminary reports. The index number based on the 1935-1939 monthly average as 100 and corrected for seasonal variation stood at 110.9 for June as compared with May's 108.9 and June, 1940's 99.3.

June employment in all groups was above that of the previous month and of the corresponding month last year. The largest increases over June, 1940, were rises of 14.58 per cent in the train and engine serv-

ice group, 14.51 per cent in the maintenance of equipment and stores group, and 12.58 per cent in the maintenance of way and structures group. Increases over May ranged from the 0.83 per cent rise in the group embracing executives, officials and staff officials to the 5.58 per cent increase in the maintenance of way and structures group.

Coal Commission Official Sees Car Shortage

Following a general discussion last week by the Bituminous Coal Commission of the need to purchase coal now to avoid a shortage of transportation in the fall, Dr. Luther Harr, Bituminous Coal Consumers' Counsel, made the prediction at a press conference on July 9 that "the estimated demand for carloads in the week ending September 13 (based on an expected increase of 16.8 per cent over the corresponding week in 1940) will top the carriers' capacity by 11,035 carloads."

"The shortage, using the same estimates," continued Dr. Harr, "will increase through the period ending October 25, when a potential carload shortage may reach 49,978 for that week. That, of course, is the time when the carriers will be asked to move the peak fall burden of other defense materials."

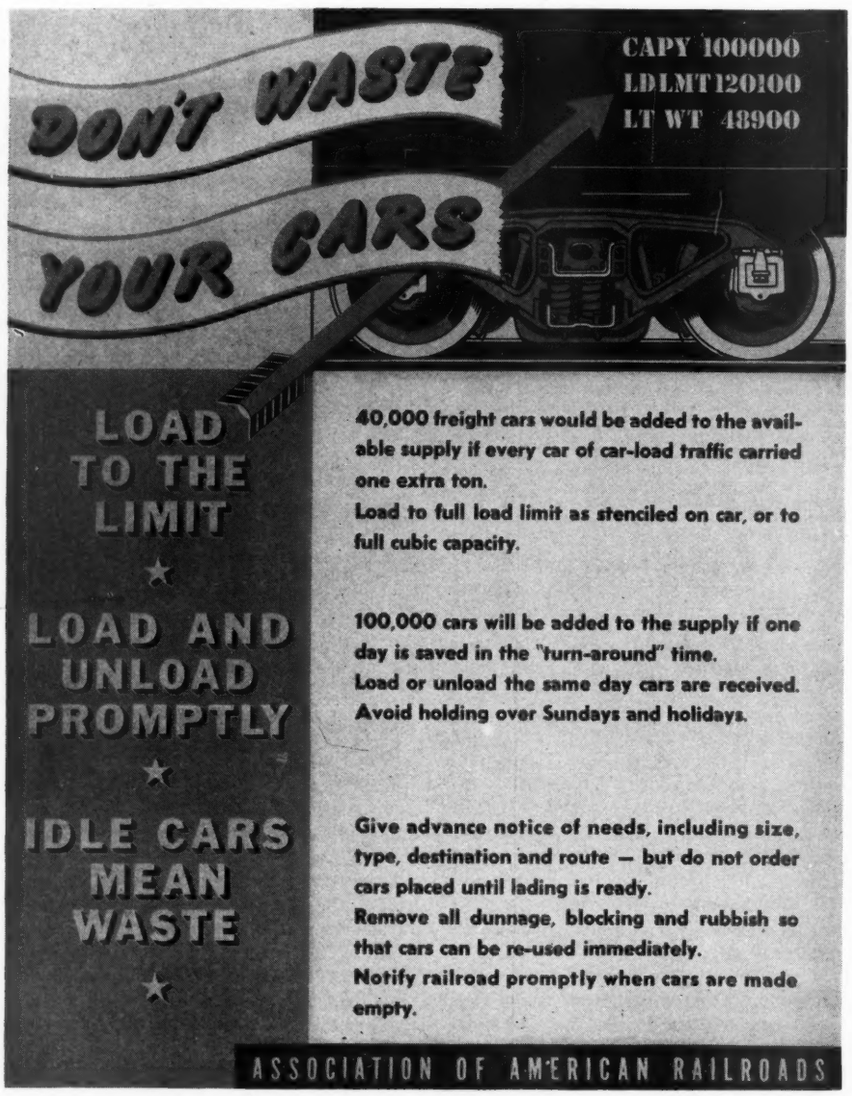
"This means," concluded Dr. Harr, "that the bituminous coal consumer—to coordinate his efforts with others for national defense and for his own protection—must stock his coal supplies between this date and September 1. And his stock must be sufficient to carry him through January 1, 1942, when some relief will come in the demands for cars. At that time cars will be released by the closing of the Lake cargo season."

Violate National Railway Labor Act

A federal indictment was returned at Peoria, Ill. on July 2 charging the Toledo, Peoria & Western, H. H. Best, superintendent and Bruce Gifford, trainmaster, with having violated the National Railway Labor Act. The indictment contained 24 counts, alleging the railroad had interfered seven times in 1939 and 1940 with employes when attempting to select a collective bargaining representative, had also interfered with organizing efforts of the Brotherhood of Railroad Trainmen among the conductors, switchmen, brakemen and switchtenders employed, and also charged efforts to coerce seven employes.

The four groups—conductors, switchmen, brakemen and switchtenders—had chosen the Brotherhood of Railroad Trainmen as their general representative in an election conducted by the Railway Labor Board last October, it was charged in the indictment. According to Howard Doyle, United States Attorney, at Peoria, the indictment was the first ever returned under penal provisions of the 1926 labor act. Each count carries a maximum penalty of $20,000.

* * *


DON'T WASTE
YOUR CARS
CAPY 100000
LDLMT120100
LT WT 48900
LOAD TO THE LIMIT
40,000 freight cars would be added to the available supply if every car of car-load traffic carried one extra ton.
Load to full load limit as stenciled on car, or to full cubic capacity.
LOAD AND UNLOAD PROMPTLY
100,000 cars will be added to the supply if one day is saved in the "turn-around" time.
Load or unload the same day cars are received.
Avoid holding over Sundays and holidays.
IDLE CARS MEAN WASTE
Give advance notice of needs, including size, type, destination and route — but do not order cars placed until lading is ready.
Remove all dunnage, blocking and rubbish so that cars can be re-used immediately.
Notify railroad promptly when cars are made empty.
ASSOCIATION OF AMERICAN RAILROADS

The Association of American Railroads is Distributing This Poster Free in Two Sizes—13½ in. by 17. and 8 in. by 11 in. District Offices of the Association Will Make Distribution to Shippers and Receivers of Freight While Allotments for Railroads are Primarily for Stations, Yard Offices, etc.

Hearings on Red Caps to Be Held

Hearings on the 10-cents-a-bag system for redcaps will be held in Chicago, July 15, and in St. Louis on July 21, General Philip B. Fleming, Administrator of the Wage and Hour Division, announced on July 5. Thomas Holland, Director of the research and statistics branch of the Division, will preside. The hearings will be held to obtain information on "wages, hours and other conditions and practices of employment of redcaps" as directed by the United States Senate in a resolution passed May 15, 1941, it was declared.

The Chicago hearing is set for 10:30 A. M., in Room 627, United States Court House. It will cover all railroad terminals in Chicago, all of the railroad terminals of the Illinois Central, and the railroad terminals in Minneapolis, Minn.; Milwaukee and Madison, Wisc.; Omaha, Nebr.; Cincinnati and Columbus, Ohio; Indianapolis, Ind.; Louisville, Ky., and the Pere Marquette station in Detroit.

The St. Louis hearing covering all railroad terminals in St. Louis and Kansas City, Mo.; Denver, Colo., and Little Rock, Ark., will be held at 10:00 A. M., in Federal Court Room No. 3, Federal Building, Twelfth and Market Streets. Dates for hearings to be held in New York City, Dallas, Tex., and Washington, D. C., will be announced later, it was stated.

All Canadian Railroaders Will Get Cost-of-Living Bonus

Because the awards would not be applicable to all railroad employees, the Canadian government has rejected recent boards-of-conciliation reports recommending a wage increase in the form of a cost-of-living bonus of $1.93 a week to railroad employees receiving $25 a week or less. In making public the reports of the boards of conciliation, Labor Minister Norman McLarty told the press that the Dominion government had rejected the awards because they were not made applicable to all railroad employees. Thus the Canadian National and Canadian Pacific are virtually directed by the government to proceed to the payment of the $1.93 a week increase to all the 143,000 employees involved in the conciliation proceedings.

The Minister also made it plain that the administration wants to see the cost of

living bonus paid to all workers in Canada, numbering about 3,000,000; and in that connection he announced that the government has amended its famous order 7440 to make sure that when a cost of living bonus is decided upon it should apply to all the employees concerned, regardless of wages or salaries. When this order was first promulgated it established the government's wage policy for the war. By this order a ceiling to wages was fixed, and it provided that any increase in wages should take the form of a cost of living bonus, that the basic wage was not changed. The basis for computing any cost of living bonus was stated to be the rise since just before the war, and it had been found by the boards in the railway case that the living cost had risen by 7.7 points since August, 1939. When there has been a rise of five points the bonus is placed at $1.25. The 7.7 index would bring the bonus up to $1.93 a week.

There is another explanation of the federal government's apparent reversal of policy on wage control. It is rumored the virtual order to the Canadian railways to give the living cost bonus to all their employees is designed to head off any demand for a larger wage increase because of pending demands on United States roads which it is feared in Ottawa may bring increases amounting to much more than the living cost bonus.

"Indirect" Mail Advertising Gets Results for the Long Island

Ordinary penny post cards with train information typewritten thereon distributed among selective service trainees have brought extra business at greatly reduced cost to the Long Island. Due to the necessity of maintaining large reserves of passenger equipment for possible troop movements, this road—like many others—is unable to schedule excursions far in advance. In the case of special excursions between New York and Camp Upton (Yaphank), N. Y., the usual tear sheets announcing the excursions could not be posted in stations until a few days before the date of the excursion; thereby greatly reducing their effectiveness as business-getters.

To make more direct contact with the public which would be interested in these excursions, the idea was conceived of distributing individual penny post cards among the 200 to 250 selectees which entrain for Camp Upton from New York every day. As is shown in the accompanying reproduction, one-half of the card contains brief information as to dates and train schedules and information centers, while the other half is left free for personal messages by the selectees to their parents and friends. The first excursion for which the cards were distributed—that of June 22—was patronized by some 300 passengers, compared with an average of 200 on previous excursions before the cards were used. This patronage compares with a total distribution for the week of 600 post cards.

SUNDAY, June 22nd, SPECIAL EXCURSION via LONG ISLAND RAIL ROAD - - ONLY $1.35 ROUND-TRIP.

Leave New York (Penn Sta) 9:30 AM, Woodside 9:39 AM, Flatbush Avenue Brooklyn 9:30 AM, Jamaica 9:54 AM; Arrive Camp Upton 11:15 AM.
RETURNING-Leave Camp Upton 5:15 PM
(All times Daylight Saving)

For additional information telephone -
New York: PEnnsylvania 6-5600
Brooklyn: REpublic 9-4200
Jamaica : REpublic 9-4200
THE LONG ISLAND RAIL ROAD

(Space for Message)

This Post Card Distributed To Army Selectees Gives the Long Island Direct Customer Contact

Billion of R. R. Bonds Dropped from New York Investment List

Approximately one billion dollars of railroad bonds have been removed from the list of obligations in which savings banks in New York may invest, according to the "legal list" issued by W. R. White, state superintendent of banks, on June 30. A number of the bond issues were removed from the list because the moratorium on earnings requirements which has been in effect for some time was not extended to include the year 1940.

The obligations which were dropped from the list are bonds of companies which failed to meet the statutory requirement that roads earn fixed charges 1½ times. Among the issues which have been removed from the list are bonds of the Bangor & Aroostook, Chicago, Burlington & Quincy, Gulf, Mobile & Northern (now Gulf, Mobile & Ohio), Northern Pacific, Southern Pacific, and Texas & Pacific.

Approximately $2,600,000,000 par value of railroad obligations remaining on the legal list this year contrasts strikingly with $7,600,000,000 on the list in 1931. The largest portion of this decline in volume of eligible investments is due to the fact that many carriers ceased to meet statutory requirements relative to earnings for the full period of years which the law specifies.

Freight Car Loading

Loadings of revenue freight for the week ended July 5 totaled 740,493 cars, the Association of American Railroads announced on July 10. This was a decrease of 168,171 cars, or 18.5 per cent, below the preceding week due to the Fourth of July holiday, but an increase of 103,324 cars, or 16.2 per cent, above the same week in 1940, and an increase of 185,341 cars, or 33.4 per cent, above the comparable week in 1939.

Loadings of revenue freight for the week ended June 28 totaled 908,664 cars. This was an increase of 23,106 cars, or 2.6 per cent above the preceding week, an increase of 156,017 cars, or 20.7 per cent above the corresponding week in 1940, and an increase of 247,260 cars, or 37.4 per cent above the comparable 1939 week.

Revenue Freight Car Loading

For Week Ended Saturday, June 28 Districts	1941	1940	1939
Eastern	190,810	154,984	136,333
Allegheny	203,641	155,730	124,860
Pocahontas	60,166	49,995	45,614
Southern	122,928	101,614	92,836
Northwestern ..	142,470	123,312	102,988
Central Western	130,425	115,507	111,063
Southwestern ..	58,224	51,505	47,710
Total Western Districts	331,119	290,324	261,761
Total All Roads	908,664	752,647	661,404
Commodities			
Grain and grain products	52,931	44,778	51,491
Live stock	9,470	11,041	10,415
Coal	170,884	123,861	104,670
Coke	14,023	10,816	6,104
Forest products.	46,404	35,884	33,010
Ore	73,025	67,500	44,102
Merchandise l.c.l.	159,300	149,432	153,457
Miscellaneous ..	382,627	309,335	258,155
June 28	908,664	752,647	661,404
June 21	885,558	728,493	638,534
June 14	862,975	712,921	633,955
June 7	852,940	702,892	630,060
May 31	801,783	639,120	563,309
Cumulative Total, 26 Weeks ...	19,846,428	16,914,535	15,263,800

In Canada.—Carloadings for the week ended June 28 totaled 63,567 cars, as compared with 65,881 cars for the previous week and 56,796 cars for the corresponding week last year, according to the weekly statement of the Dominion Bureau of Statistics.

	Total Cars Loaded	Total Cars Rec'd from Connections
Total for Canada:		
June 28, 1941	63,567	31,191
June 21, 1941	65,881	31,058
June 14, 1941	65,431	31,323
June 29, 1940	56,796	25,786
Cumulative Totals for Canada:		
June 28, 1941	1,497,740	760,276
June 29, 1940	1,299,933	639,089
July 1, 1939	1,110,952	541,483

Railroads Move Crude Oil to Refiners

Harold L. Ickes, Petroleum Coordinator, has been notified that the first shipment in many years of crude oil to the East Coast by railroad tank cars began on July 7 from Lima, Ohio, when 25 cars left that city bound for the Bayonne refinery of the Standard Oil Company of New Jersey.

Until now, it was pointed out, "ocean-going tankers have been used almost exclusively in the delivery of crude oil and petroleum products to the East Coast as their freight rates have been much lower than those of the railroads."

The diversion of 50 tankers employed in this service to the British resulted in the impending East Coast shortage of petroleum products, declared Mr. Ickes. Before the diversion of the tankers, approximately 1,250,000 barrels were delivered to Atlantic Coast States daily by this means. A de-

cline of 150,000 barrels daily in tanker shipments was recorded as of the week ended June 28. This deficit is expected to reach 250,000 barrels daily by the end of July.

As one of the various methods he has adopted to offset these shortages, the Co-ordinator, on June 24, asked the oil industry to utilize fully the nation's railroad tank car capacity.

Following the July 7th shipment from Lima, Ohio, regular shipments between that city and the Bayonne refinery will be made, it was said. The crude oil is being brought to Lima by pipe line, that city being the eastern terminal of the Buckeye Pipe Line Co. Other large oil companies are reported to be making similar arrangements.

Meanwhile, representatives of the oil industry have been conferring with the Co-ordinator over plans for the construction of a large pipe line from the Gulf fields to the East Coast. The Coordinator is now studying the plans presented by the companies and will shortly make a recommendation as to the route and type of pipe line to be constructed. Coincident with these efforts, a survey is being made of the ocean-going tanker situation "with the view of eliminating cross-hauling and other competitive practices so that available tankers now in service can transport larger quantities of petroleum products."

Also this week, Mr. Ickes said that the bill increasing the load-line for tankers in coastal service, on which Congressional action has now been completed, will aid materially in abating the impending East Coast shortage of petroleum products.

The bill, when it receives Presidential approval, will permit increased loading of coastal tankers. It is estimated, on the basis of the number of tankers now in the East Coast service, that this increase in loads will approximate from 30,000 to 40,000 barrels daily in so far as East Coast deliveries are concerned. Representatives of the Coordinator's office favored passage of the bill before Congressional committees.

Tank Car Owners Organize to Promote Maximum Utilization

A voluntary organization of owners of 25 or more tank cars to promote the maximum utilization of tank cars during the national emergency was established by representatives of owners of tank cars at a meeting in Chicago on July 7. The meeting was called by Ralph Budd, transportation commissioner of the Advisory Commission to the Council of National Defense, who emphasized the immediate need for the "pooling" of efforts and facilities to guard against government operation of tank cars.

Under the plan adopted at the meeting, an executive committee of 15 representatives of owners of tank cars will formulate a plan whereby the maximum utilization of tank cars will be developed, with priority to materials essential to national defense. This committee was given the power to appoint a paid representative who will act as Mr. Budd's consultant on tank cars.

The executive committee consists of (1) four representatives of owner-lessors, (2) four representatives of petroleum shipper-owners, (3) two representatives of oil companies that lease tank cars, (4) one representative of the railroads, (5) one representative of the chemical industry owners, (6) one representative of the edible and non-edible fat and oil industry owners, (7) one representative of the alcohol industry owners and (8) one representative of the molasses industry owners. Representation on the committee bears a relation to the number of tank cars used by each of the above groups. It was disclosed by Mr. Budd that 150,000 tank cars are in existence in the United States, of which 125,000 are used by the petroleum industry, 12,000 by the chemical industry, 9,000 by the railroads and 4,000 by the molasses, alcohol and vegetable oil industries.

Those elected members of the executive committee are as follows:

Group 1. B. C. Graves, vice-president of the Union Tank Car Company, Chicago; L. H. S. Roblee, president of the North American Car Corporation, Chicago; Robert Rogers, president of the Shippers Car Line Corporation, New York; and H. E. Coyl, sales manager of the General American Transportation Corporation, Chicago. Group 2. J. S. Wood, vice-president of the Pan-American Petroleum & Transport Company, New York; J. D. Reardon of the Union Oil Company of California, Los Angeles; C. R. Musgrave, vice-president of the Phillips Petroleum Company, Bartlesville, Okla., and P. D. Anderson of the Lion Oil Refining Company, El Dorado, Ark. Group 3. L. S. Coles of the Standard Oil Company of Indiana, Chicago, and R. J. Walsh of the Texas Company, New York. Group 4. J. J. Mahoney, general superintendent of transportation of the Atchison, Topeka & Santa Fe, Chicago. Group 5. H. M. Mabey of the Mathieson Alkali Works, Inc., New York. Group 6. T. C. Burwell, vice-president of the A. E. Staley Manufacturing Company, Decator, Ill. Group 7. H. E. Seel of the Commercial Solvents Corporation. Group 8. R. R. Luddecke of the Fleischman Transportation Corporation.

Jones Discusses Equipment Pooling Plan

Jesse Jones, Federal Loan Administrator, disclosed at a press conference on July 9 that he had recently discussed with Ralph Budd, transportation member of the National Defense Commission, the question of whether or not the government should undertake the financing of a $1,000,000,000 freight car building program. Previously reports had been published in New York that the officials of several major railroad systems were considering such a program in an effort to alleviate the strain on the financial structures of the carriers due to the demands of the national defense program.

Inquiries at the offices of the Association of American Railroads and the Defense Commission's Transportation Division revealed that neither of these agencies knew anything concerning such a contemplated program. Both said that the published reports were the first that they had heard of such a project.

Mr. Jones admitted when questioned that he had read about the program and that he had recently told Mr. Budd that the Reconstruction Finance Corporation would be glad to assist the carriers if they wished to establish a stock pile of equipment. In fact, said Mr. Jones, the R. F. C. has been cooperating with the carriers for several months in offering to buy any of their equipment trusts that are offered. However, he said that he had not discussed the car-buying program with any railroad officials.

According to Mr. Jones, no formula has been worked out as yet for such a program, but he did not feel that it would be necessary to build $1,000,000,000 worth of cars. All that was necessary, he continued, was to purchase enough to keep the car builders busy. If the railroads didn't want the full output of the car builders, he continued, the R. F. C. would be willing to take the balance and place it in a stock pile.

Questioned about the possible shortage of cars in the fall, Mr. Jones declared that he felt the railroads were in "pretty fair shape to meet reasonable demands." He admitted that prognosticators had recently been "a little pessimistic," but he was of the opinion that it would be better to wait a little while before reaching any conclusions.

The Federal Loan Administrator was also queried concerning the possibility that the R. F. C. might decide to construct a railroad in northern Wisconsin and Minnesota to transport iron ore to the Great Lakes ports for transshipment. Mr. Jones admitted that such a project could be undertaken under the recently-enlarged powers of the R. F. C., but had no comment to make as to whether it had been considered.

He was also asked whether or not the R. F. C. had been asked to finance a projected pipe line from Mexico to the United States to carry crude oil. The R. F. C. had had no specific requests for money for pipe lines, he replied, but it could build pipe lines and would if they were needed for national defense.

One questioner wanted to know whether the construction of pipe lines would not hurt the railroads. Mr. Jones was emphatic in saying that this would not be true. In fact, he continued, the rails are not now hauling crude oil because pipe lines and tankers are "much cheaper." However, he felt that if any pipe lines were built, private capital probably would build them.

Proponents Urge Seaway Project

Testimony during the past week before the House rivers and harbors committee on the St. Lawrence power and seaway project was presented almost wholly by proponents. Although the committee had planned to leave for Canada to make a physical inspection of the project on July 8, it now appears that the trip will not begin until about July 12.

Included in the list of witnesses appearing during the past week were William Knudsen, director general of the Office of Production Management; James C. Bonbright, chairman of the New York State Power Authority; Gerald V. Cruise, acting chief engineer of the New York State Power Authority; Mayor Edward J. Jeffries of Detroit, Mich.; Mayor Carl Zeidler of Milwaukee, Wisc.; F. S. Keiser of the Duluth, Minn., Chamber of Commerce;

John C. Buekema, representing the National Seaway Council; Leo Crowley, chairman of the Federal Deposit Insurance Corporation; Governor John Moses of North Dakota; Governor Harold Stassen of Minnesota; and J. H. Ross, who appeared in behalf of the New York State Waterways, Inc. All of the abovementioned witnesses favored the project with the exception of Mr. Ross.

The committee also received letters from Paul V. McNutt, Federal Security Administrator, and Governor Van Waggoner of Michigan, expressing their approval of the project and urging the committee to favorably report it to the House.

Mr. Knudsen told the committee that he favored the immediate construction of the project and that the materials required for it would not take much from the defense material needs and that the completion of a number of defense construction projects in the fall would leave an ample supply of labor available for employment on the seaway project. He endorsed all phases of the measure and declared that he did not think the project would injure such lake ports as Buffalo and Cleveland.

When Representative Beiter, Democrat of New York, suggested to Mr. Knudsen that it might be better to use Great Lakes shipyards now idle for the construction of mine sweepers, mine layers, and other small vessels, thus relieving coast shipyards and making it possible for them, by enlarging their ways, to construct larger ships, Mr. Knudsen replied to this effect:

"Well, the way you put it, it sounds reasonable to me."

Governor Moses of North Dakota and Governor Stassen of Minnesota both urged the committee to approve the measure, taking the position that the seaway would bring lower freight rates to the farmers in their states. Governor Stassen also pointed out that the project would make world ports out of many of the Minnesota cities.

Mr. McNutt told the committee in his letter that he had been interested in the project for some 20 years, and that he had devoted considerable attention to it when he was governor of Indiana several years ago. He was convinced that its completion would be a good thing for the country and would provide a great reservoir of power which is urgently needed at the present time. Governor Van Waggoner also urged the adoption of a favorable report on the bill by the committee, saying that the state of Michigan had favored the seaway for many years.

Also, this week Senator Bailey, Democrat of North Carolina and chairman of the Senate commerce committee, disclosed that he had requested the State Department to present legal proof that the proposed St. Lawrence agreement is not a treaty within the meaning of international law. Senator Bailey, whose committee will consider the project in the Senate, said that he had been assured by Undersecretary Welles of the State Department that a brief will be filed.

An additional witness was added to the opposition list when Marcel Garsaud, general manager of the Board of Commissioners of the Port of New Orleans, appeared on July 9 and opposed the measure. There is nothing to this argument that the project is a defense measure, he told the committee. Moreover, its construction would, he felt, take traffic away from the railroads and the Gulf ports. This traffic, he continued, would be immediately removed and it would take years to build up new traffic to replace it.

He urged the committee to seek professional military advice if it wanted to ascertain the best means of spending $300,000,000 for national defense, rather than approving the St. Lawrence project.

Rates and Prices on Farm Products

(*Continued from page 63*)

road proportion of total perishable traffic declined severely, and that the railroads failed to maintain their competitive position." The comparisons are between the three-year period 1937-39 and the three-year period 1928-30. In the former commercial production of all fruits and vegetables averaged 15.7 per cent greater than in 1928-30, while the tons of the same commodities originated by the Class I railroads declined 22.6 per cent. This was accompanied by a "substantial growth of perishable highway and water traffic."

"The reasons for the growth of motor trucking," Mr. Matlock said, "are found in relatively low freight rates, rapid and flexible service, pick up at farm and delivery at market, transportation of less-than-carload quantities at carload rates, and the elimination of costly packing requirements. Motor trucks are particularly effective for short hauls, but the practical distance for movement by motor truck is expanding. . . . The shipment of Florida citrus fruits by boat to the Eastern port cities is a notable development of the 1930's. Expansion of the perishable water traffic will depend chiefly upon the enlargement of specialized facilities adapted to the transporting of perishables."

With respect to rate-price relationships, the study has this to say: "Reductions in railroad freight rates on perishables during the 1930's were gratifying to shippers, but were less than proportionate to declines in the prices of fresh fruits and vegetables in the destination markets. As a result the proportion of destination value of this freight absorbed by freight charges increased distressingly, from the viewpoint of agriculture, and the decline in farm prices, which are in a sense a residual, was extreme. With respect to each group of perishables, the index of farm prices fell below the index of freight rates in 1930 and remained below in all the years from 1930 to 1940, except in 1936, when the indices of farm prices of apples and of potatoes rose above the respective freight rate indices."

Then comes Mr. Matlock's aforementioned reference to the suggestion that freight rates be linked to destination prices, followed by his finding that the freight-rate approach alone will not suffice. The problem, he added, must be attacked from both the rate and price directions—a course which "has, in general, been pursued by interested agencies, with varying results." Previously, he had observed that "the trouble can be blamed on the price level"—if freight rates in a period of price maladjustment are "as low as they can be made in view of the carriers' revenue requirements, and in the presence of other transportation conditions." On the other hand, "recent experience shows that some rate reductions can usually be made, although this can be done more easily if the reductions are presumed to be temporary."

OPM Urging Conservation of Nickel-Steel Scrap

Plans of the Office of Production Management and the interested industries to convince railroads and other large nickel steel consumers that they should also become producers of usable nickel scrap were discussed in Washington, D. C., on July 8 at a meeting sponsored by the National Conference of Business Paper Editors. Earlier in the day, the steel industry had acted to promote conservation of alloy scrap, having appointed an Alloy Steel Scrap Conservation Committee to function as a sub-committee of the American Iron and Steel Institute's Defense Committee; while discussions at the aforementioned meeting indicated that the largest producer of nickel—International Nickel Company—is co-operating in such ways as the development of new mines, surveys of the scrap situation and educational work on the use of substitutes for nickel.

The Iron and Steel Institute's new Steel Scrap Conservation Committee is headed by Dr. C. H. Herty, Jr., research engineer of the Bethlehem Steel Company. Dr. Herty was among those attending the Washington meeting sponsored by the business editors. Others were H. Leroy Whitney, chief of OPM's Alloy Steel Section; D. A. Uebelacker, chief of OPM's Nickel Section; C. G. Holmquist of the Office of Price Administration and Civilian Supply; T. H. Wickenden, assistant manager of the development and research department, International Nickel Company, and Robert A. Wheeler, advertising manager for International Nickel's International Alloy Steel Division.

Mr. Whitney said that the greatest alloy "mine" in the world from which nickel can be got immediately is the United States' scrap pile, and thus OPM is promoting conservation among large users of alloy steel. In this connection he went on, OPM has prepared a letter setting forth proper groupings of alloy scrap for most efficient re-use. The problem, as Mr. Whitney sees it, is to get over to consumers the "absolute necessity" of properly sorting their scrap. He has an idea that proper sorting, instead of costing money, will turn out to be a profitable operation as a result of higher prices commanded by uncontaminated scrap.

Speaking as chairman of the new Alloy Steel Scrap Conservation Committee, Dr. Herty explained the committee's general idea of undertaking to develop plans for finding out where the scrap is, how much of it there is, and what facilities are available for its proper preparation. In carrying out this plan, the committee will circularize prominent users and survey preparation methods in order to find out how the

availability of scrap may be correlated with its preparation.

Mr. Uebelacker said that it's "pretty obvious" to OPM that alloy scrap is not coming back, and OPM is "pretty sure" that there is a lot of nickel scrap around the country that should be coming back. This, as Mr. Uebelacker put it, "points up the necessity of conserving nickel through the scrap pile method." Conservation of nickel, he added, is the best available answer to the shortage problem, because there is no present prospect of greatly increased supplies of virgin nickel.

Assistant Manager Wickenden of International Nickel's development and research department told of surveys he has made of the scrap situation and of instances wherein nickel consuming industries are developing well-organized procedures for returning their scrap. If only 10 per cent of the nickel going into steel could be returned, Mr. Wickenden said, it would amount to a "big recovery." The principal problem, as he sees it, is to educate consumers to have their nickel scrap properly segregated and to see that it isn't contaminated by other steel scrap; and one important approach is an appeal on the basis of the higher prices commanded by uncontaminated scrap.

Club Meeting

The Eastern Car Foreman's Association will hold its ninth annual golf tournament and field day at the Race Brook Country Club, New Haven, Conn., on Thursday, July 24. F. H. Becherer, assistant superintendent motive power and rolling equipment of the Central of New Jersey, is general chairman of the outing.

Justman & Co. Guilty in Freeze Damage Racket

A jury in the federal district court at San Francisco, Cal., on June 25 found Justman & Co., Inc., New York receiver and distributor of fresh fruits and vegetables, guilty of violation of the Elkins Act on each of 14 counts. The company was originally charged on 17 counts by a federal grand jury at San Francisco last December after an Interstate Commerce Commission investigation of frozen damage claims collected from the Southern Pacific. Three of these counts were dismissed by government prosecutors after the trial opened on June 3.

The trial of the Justman case constitutes the first extended court hearing on alleged filing and collecting of false claims on freeze damaged perishables by certain New York receivers. This practice came under the scrutiny of the I. C. C. in 1940, and in December 1940, indictments of seven New York firms were secured. Of the seven, three pleaded guilty and received fines as follows: S. Goldsmith, Inc., 14 counts. $14,000; Carbone Bros. & Co., Inc., 4 counts, $4,000; and Miller-Gerow Company, Inc., 3 counts, $3,000. The cases of Yeckes-Eichenbaum, Inc., 15 counts, and William Shapiro, Inc., 10 counts, are scheduled for trial in San Francisco on July 15, and that of George F. Fish, Inc., 9 counts will be tried on November 4.

Charges against Justman & Co., Inc., were based on 17 transactions between the defendant and the Miller-Gerow Co., Inc., New York, involving the transfer of l. c. l. lots of lettuce, carrots and other vegetables from Justman to Miller-Gerow during January and February 1939 and the same months of 1940. The government charged that these lots were consigned to Miller-Gerow, and that in each of the 14 transactions finally tried, the defendant, after the receiver had rendered an account sale, issued an invoice to the receiver which showed higher and lower prices than the sales actually reported by Miller-Gerow. These invoices, it was contended, were used as the basis for the collection of damage allegedly due to freezing, the defendant filing a claim for the difference between the low and the high prices.

The Freight Claim Division of the Association of American Railroads, realizing that these false claims are costly to the railroads, that the "racket" has resulted in a competitive advantage to shippers or receivers who indulge in this practice to the prejudice of those who do not, that the practice has resulted in discrimination between cities and railroads, and that the same "racket" is being practiced at other large receiving centers, revised its principles and practices for the investigation and disposition of freight claims by a unanimous vote of members attending the division's annual meeting at Denver, Colo. on June 10-12, to prevent the acceptance of false claims. The revisions provide that "a claim for damage or deterioration resulting from improper refrigeration, ventilation, or application of artificial heat, negligent delay or other alleged mishandling or causes shall be adjusted in accordance with the facts developed by investigation and the condition of the property as certified or concurred in by the authorized carrier inspection bureau at final destination. In case of doubt or dispute, government inspection reports may be given due consideration. Claim for breakage, freezing or other physical damage to shipments of fresh fruits, melons or vegetables may be adjusted on the basis of proven loss provided that prior to delivery or at the time of unloading the receiver or owner of the property shall have segregated all packages claimed to have been so damaged, and the carrier has been afforded full opportunity to make a complete examination of such packages. Such claims must be supported with accounts sales."

Action taken by the United States Department of Agriculture in June in proposing specifications for damage is looked upon as a definite aid in solving claim problems. The purpose of the specifications is to provide a basis for determining whether or not packages are damaged and whether the damage is or is not of a character and degree that the consignee is entitled to payment.

Representation of Employees

Following an investigation and check of representation authorizations, the National Mediation Board has certified that the Railroad Division, Inlandboatmen's Union, Port of New York, has been duly designated and authorized to represent unlicensed marine personnel (oilers and firemen), employed by the New York, New Haven & Hartford. In a like proceeding on the Hudson & Manhattan the Board found that the United Transport Service Employees of America had been duly designated to represent red caps and station porters employed by that road.

Heavy July 4 Passenger Traffic on Eastern Roads

Passenger travel in and out of New York for the Independence Day week-end was the highest in years for most roads and the highest in a decade for a number of them. And in Boston, Mass., the Boston & Maine handled its biggest "fourth" traffic since 1928.

Chief factors in the increase were the occurrence of the holiday itself on a Friday, as compared with a Thursday last year; the addition of thousands of soldiers on leave from encampments and lured to the rails by a special fare of 1¼ cents a mile and a general lack of private automobiles at the camps; a high level of employment and wages in the country and improved service offerings by the carriers. The travel volume soared in spite of heavy rain on July 4 and threatening weather on Sunday, July 6. It would certainly have been even higher if a number of roads had not found it necessary to curtail excursion trains ordinarily scheduled at this season, in order to conserve equipment for possible troop movements. By agreement with the War Department the carriers maintained a reserve of cars for emergency use.

The Pennsylvania enjoyed a passenger volume in and out of New York estimated to be 32 per cent higher than that of the comparable period of last year. From Thursday noon to midnight on Sunday its New York division carried 322,490 passengers.

P. R. R. ticket sales on July 4 were 63 per cent over last year. Between 4 a. m. and 11 p. m. on Sunday some 26,000 soldiers returned from furlough to Southern camps in 11 special trains and 18 extra sections. In addition some 3,000 enlisted men entrained for Fort Dix in New Jersey. The New York Central estimates that its traffic was 30 per cent over 1940 and almost equalled its record holiday traffic of 1930. On Thursday and Friday it operated over 200 extra trains out of Grand Central terminal and on Sunday it operated eight special troop trains out of the city.

The Baltimore & Ohio reports extremely heavy travel over the holiday period, with one or two extra sections of all regular trains. Heaviest contingent of enlisted men into New York was from Camp Meade, Md. The road handles the men from the camp to Baltimore (about 20 mi.) in its own motor buses. The New York, New Haven & Hartford estimates about a 30 per cent increase in business as compared with last year. During the three-day period, July 4 to 6, the road operated 40 special trains (25 inbound and 15 outbound) in and out of New York. In addition two troop trains served upper New England camps. The New Haven made careful preparations to prevent pos-

sible occurrence of any fire hazards on its property during the holiday period. Special details of railroad police were assigned to augment the services of regular watchmen at storehouses, piers, shops, bridges, stations, and other important points, including yards situated in metropolitan areas. All fire-fighting equipment including hose and extinguishers, were thoroughly inspected and tested, and extra extinguishers placed at various points.

The Delaware, Lackawanna & Western handled westbound, on July 3 and 4, 112 per cent more passengers than on corresponding dates in 1940 and 37 per cent more than on May 29 and 30 (Memorial Day week-end) this year. On July 6 136 per cent more passengers rode eastbound into New York than on the comparable date last year and 48 per cent more than on the Sunday following Memorial Day this year. The Erie reports a 20 per cent rise in traffic and the operation of five extra trains, while the Central of New Jersey, the New York, Ontario & Western and the Lehigh Valley report generally increased business and lengthened trains.

In Boston the B. & M. carried its biggest Fourth of July week-end of railroad travel since 1928, with ticket sales at North Station, Boston, alone up over 33 per cent compared with last year. On Sunday, between 5 p. m. and midnight, about 95 per cent of the patrons rushed homeward at the same time. Many of these passengers arrived at their destination from 15 to 30 min. ahead of advertised schedules by reason of a "staggered stop" operation used on trains from points of heavy passenger concentration. When home-bound passengers arrived at points like Old Orchard Beach, Me., and Hampton they found, instead of the regular Boston train, a fleet of trains each of which skipped certain stops. In addition to the civilian customers, the B. & M. handled more than 4,000 soldiers in and out of Fort Devens, Ayer, Mass.

Western Lines Have Heaviest Holiday Traffic in Years

Holiday passenger traffic over the week-end of July 3-7 was the heaviest the Western railways have experienced in a number of years. The New York Central reported that travel into and out of Chicago was the heaviest in 10 years and required the operation of 100 extra trains. The Illinois Central reported that its traffic was 35 per cent heavier than last year, and the Chicago, Milwaukee, St. Paul & Pacific that its passenger revenues over the week-end were 35.5 per cent greater than during the corresponding week-end a year ago. The Chicago & North Western's passenger revenues from July 1 to 4 were 42 per cent larger than on the same days last year and the highest for these days in any year since 1931. The Pennsylvania's western region, from July 2 to 7, handled 89,375 passengers compared with 66,009 on the same days last year, an increase of 35.4 per cent. The Chicago & Eastern Illinois experienced a 100 per cent increase in passenger revenues during the first 8 days of July. This increase was due to the movement of 1,500 draftees from Camp Forest, 500 from Alexandria, La., military movements and general holiday traffic.

The large volume of traffic this year was due to the fact that the Fourth of July occurred on Friday and thus extended the holiday period over Saturday and Sunday. This three-day period enabled persons to travel to military camps and other places not ordinarily visited on shorter holiday periods.

Although traffic was heavy, most railroads were not forced to add large numbers of extra trains. This was due to a large extent to the fact that new motive power and light-weight cars permitted the operation of longer trains.

Draftees traveling home on furlough helped swell the volume of traffic this year. This was especially noticeable at Camp Forest, Tenn., served by the Nashville, Chattanooga & St. Louis, where the demand for transportation was so great that furloughs had to be staggered. As a consequence, 3,500 draftees were given furloughs on July 3, 3,500 on July 11 and 3,500 on July 18. On July 3, three special trains were operated from the camp to Chicago, one from the camp to St. Louis, and one from the camp to Cincinnati.

House Subcommittee Reports Forwarder Bill

A House interstate and foreign commerce subcommittee which has been considering forwarder legislation for the past several months reported out to the full committee on July 9, a draft of a measure which is, in many respects, identical to those introduced in the House last week by Representatives Bulwinkle, Democrat of North Carolina and Wolverton, Republican of New Jersey, details of which were given in last week's issue.

The House committee now has before it the subcommittee's version, the Wolverton-Bulwinkle measures (H. R. 5179 and H. R. 5178), the Senate-approved Wheeler-Reed bill (S. 210), and H. R. 3684, introduced by Chairman Lea of the committee.

As noted in last week's issue, the forwarders do not like some of the features of the Senate measure nor of the Bulwinkle-Wolverton measures and their objections also carry over to the subcommittee draft, which, as it has already been noted, is similar in many respects.

Included in the objectionable features of the latter, which would become Part IV of the Interstate Commerce Act, are a provision for permits rather than certificates of convenience and necessity for forwarders (the Bulwinkle-Wolverton bills would call them licenses); and a stipulation that no permit shall be denied to a forwarder applicant because of its relationship with a common carrier subject to Part I, II, or III of the Interstate Commerce Act. Furthermore, the new bill provides that the Interstate Commerce Commission would be prohibited from denying a permit on the grounds that the proposed forwarder service would be in competition with services of other freight forwarders.

One important change, in the opinion of the forwarders, is the fact that in the Bulwinkle-Woverton bills there was an exemption for forwarders of a "single general commodity," in addition to the usual ones for forwarder services of co-operatives and on agricultural commodities. The subcommittee version contains the latter exemptions, but leaves out the "single general commodity."

Another change in the bill is noted in the Bulwinkle-Wolverton provision which would authorize carriers whose services the forwarders utilize to publish special rates applicable on forwarder traffic into and out of concentration and break-bulk points. However, it was provided that these rates would be available to any shipper, forwarder, or carrier in a position to operate "under like conditions."

The subcommittee bill omits this language, but provides that common carriers by motor vehicle and by air may publish special rates if the difference in rates "is justified by a difference in the respective conditions under which such instrumentalities or services are employed or utilized."

As did the Bulwinkle-Wolverton bills, the new measure would require that joint-rate arrangements with motor carriers be discontinued within one year, but it is further provided that if the commission finds that the adjustment can be made in a shorter period it may so order. The forwarders object to the fact that the bill makes the one-year period mandatory, whereas other versions had provided that the commission might extend this period if it found such an extension to be in the public interest.

Following the language of the Bulwinkle-Wolverton bills, the subcommittee section dealing with the relationship between freight forwarders and "other persons" provides that nothing in the act would make it unlawful for any common carrier subject to Part I, II, or III to acquire control of a freight forwarder; and "in any case where such control exists, no rate, charge, classification, rule, regulation, or practice of the common carrier or of any freight forwarder controlled by such common carrier, or under common control with such common carrier, shall be held to be unlawful under any provision of this act because of the relationship between such common carrier and such freight forwarder." As noted last week, this language would preclude any such finding by the commission as that in the Freight Forwarding Investigation to the effect that railroads, through their controlled forwarders, were offering services at rates different from those published in the rail tariffs.

The rate-making rule in the subcommittee bill would follow those in other parts of the act, while forwarders would be prohibited from discriminating against any person, port, port district, gateway, transit point, locality, region, district, territory, or description of traffic.

The new bill does not provide for any "grandfather" date but stipulates that any forwarder in business "when this section takes effect" may continue operations for a period of 180 days during which it is required to file an application for a permit.

The other provisions are similar to those included in the Bulwinkle-Wolverton bills and deal with the general powers and duties of the commission; rates charges, and practices of forwarders; tariffs of forwarders;

accounts, records and reports; bills of lading and liability for delivery of property; collection of rates and charges; and unlawful acts and penalties. Another section of the subcommittee bill would limit forwarders to the use of common carriers, except for the performance of terminal collection and delivery and transfer services. There is also included a provision that air carriers subject to the Civil Aeronautics Act of 1938 shall be among carriers which the forwarders may utilize; while another section would amend the Civil Aeronautics Act to eliminate "freight forwarders subject to Part IV of the Interstate Commerce Act" from the definition of "air carrier."

Equipment and Supplies

LOCOMOTIVES

THE ILLINOIS CENTRAL has ordered two 4,000 hp. Diesel-electric passenger locomotives from the Electro-Motive Corp.

THE NATIONAL RAILWAYS OF MEXICO are inquiring for 26 steam locomotives comprising 20 of the 4-8-4 type and six of the 2-6-6-2 type.

THE LOUISVILLE & NASHVILLE is inquiring for from 14 to 21 steam locomotives of the 2-8-4 type. This road was reported to be in the market for the above locomotives in the *Railway Age* of June 14.

THE UNITED STATES NAVY DEPARTMENT has ordered one 50-ton Diesel-electric switching locomotive from the Atlas Car & Manufacturing Co. at cost of $26,398. The inquiry for this locomotive was reported in the *Railway Age* of June 14.

CANADIAN NATIONAL. — The twenty 1,000-hp. Diesel-electric locomotives recently ordered by this road, as reported in the *Railway Age* of June 14, are for service on the Grand Trunk Western. The locomotives were ordered 15 from the Electro-Motive Corporation and five from the American Locomotive Company.

THE NEW YORK, ONTARIO & WESTERN has ordered five 44-ton Diesel-electric switching locomotives from the General Electric Company. This road was reported to be contemplating the acquisition of four Diesel-electric switching units in the *Railway Age* of March 22.

THE DELAWARE & HUDSON has ordered 15 single-expansion articulated locomotives of the 4-6-6-4 type from the American Locomotive Company at an estimated cost of $3,250,000. The locomotives will be used in fast heavy freight service. Delivery is expected during the middle or latter part of 1942.

THE NEW YORK, SUSQUEHANNA & WESTERN has ordered four 1000-hp. Diesel-electric locomotives from the American Locomotive Company. These are in addition to the two locomotives of the same size ordered from the American Locomotive Company in June as reported in the *Railway Age* of June 28. The company expects to place orders for two additional units.

THE ST. LOUIS-SAN FRANCISCO has received court authority for the purchase of 15 steam locomotives of the 4-8-4 type to cost $2,692,500 and five Diesel-electric switching locomotives of 1,000-hp. each to cost $392,500.

THE LEHIGH VALLEY has ordered three 44-ton Diesel-electric switching locomotives from the General Electric Company. This road was reported to be contemplating the acquisition of some small Diesel-electric switching locomotives in the *Railway Age* of March 22.

FREIGHT CARS

THE READING has on order with the company's own shops 50 cement cars not previously reported by the *Railway Age*.

THE WABASH has asked the district court for permission to purchase materials for the construction of 100 freight cars in company shops at a cost of $350,000.

THE NEW YORK, CHICAGO & ST. LOUIS is inquiring for 250 low side drop-end gondola cars of 50 tons' capacity and 100 50-ft. 6-in. automobile cars of 50 tons' capacity.

THE ST. LOUIS SOUTHWESTERN has been authorized by the District court to construct 500 freight cars in its Pine Bluff, Ark., shops.

THE ARGENTINE STATE RAILWAYS, reported to be in the market for 375 box cars of 30 tons' capacity in the *Railway Age* of June 28, are inquiring for from 175 to 500 56,100-lb. box cars.

THE CAMBRIA & INDIANA has placed an order for repairs to 400 hopper cars with the Bethlehem Steel Company; the road has not ordered 400 new hopper cars from Bethlehem, as reported in the *Railway Age* of June 28.

THE DELAWARE, LACKAWANNA & WESTERN has placed orders for a total of 1,250 freight cars allocating 600 box cars of 50 tons' capacity and 250 gondola cars to the American Car & Foundry Co. and 400 box cars of 50 tons' capacity to the Magor Car Corporation. The contemplated purchase of this equipment was first reported in the *Railway Age* of May 17.

IRON AND STEEL

THE WABASH has asked the district court for permission to purchase 10,000 tons of 112-lb. rails and fastenings at a cost of $1,383,400.

THE CHICAGO, BURLINGTON & QUINCY has ordered 30,000 tons of rails, placing 7,500 tons with the Inland Steel Company, 7,500 tons with the Carnegie-Illinois Steel Corporation and 15,000 tons with the Colorado Fuel & Iron Company.

THE CHICAGO, ROCK ISLAND & PACIFIC has ordered 35,000 tons of rails from the Carnegie-Illinois Steel Corporation, the Inland Steel Company and the Colorado Fuel and Iron Company. Court authorization for its purchase was reported in the *Railway Age* of June 14.

PASSENGER CARS

THE ARGENTINE STATE RAILWAYS are inquiring for 50 baggage cars.

THE ILLINOIS CENTRAL is constructing two lounge cars in its own shops.

THE PULLMAN COMPANY has ordered 20 cars from the Pullman-Standard Car Manufacturing Company. The cars will be combined with two diners recently ordered by the Illinois Central (reported in *Railway Age* of April 26) to make up two new trains for this road's Panama Limited.

SIGNALING

THE CANADIAN NATIONAL has awarded a contract to the Union Switch & Signal Co. for furnishing a relay type interlocking for the Terminals at Montreal. Included in this contract are interlocking facilities at the south end of the station, the Lachine canal lift bridges, Bridge street junction, the double-track (westerly) connection and junction to the freight line, westward along the freight line to St. Henri, where in addition to the interlocking protection of the double track swing bridge across the Lachine canal, a number of interlocked functions on the west side of the canal are controlled. All of the signaling described is to be controlled from the control machine to be located in a new three-story tower at the lift bridge. Direct-wire control will be used for the functions in the immediate vicinity of the tower and for Bridge street junction. A code system of control will be used for controlling the interlocked groups at the south end of the station, the junction with the freight line and the St. Henri swing span layout. Provisions have also been made for the ultimate extension of this system to control the north end of the station, the Victoria Bridge junction and as far westward as Turcot yard. The control machine for the first stage will be equipped with 58 switch levers and 38 signal levers for the control of 82 style M-2 electric switch movements and 90 two-unit style H-2 dwarf signals. Alternating current track circuits will be provided and relays generally will be of the plug-in type. A train starting system will be installed for 18 tracks with coordinated manipulations and indications between the conductors, gatemen and train director located in the new signal tower at the lift bridge.

MOTOR VEHICLES

THE SANTA FE TRAIL TRANSPORTATION COMPANY has ordered six air-conditioned 37-passenger parlor car type motor coaches from the a. c. f. Motors Corporation.

THE NORFOLK SOUTHERN BUS CORPORATION has ordered one 26-passenger parlor car type motor coach from the a. c. f. Motors Corporation.

Construction

MISSOURI PACIFIC.—A 60-ton mechanically-operated coaling station is being erected by company forces at Osgood, Kan. The station will use elevating machinery of the skip hoist type with a 65-cut. ft. bucket. The overhead bin will be rectangular in shape and will be constructed of structural steel and wrought iron.

SOUTHERN PACIFIC.—The Texas Highway Department has awarded a contract amounting to approximately $74,000 to R. C. Buckner, Jacksonville, Tex., for the construction of a single-track railroad bridge and adjacent highway approaches, to carry a track of the Texas & New Orleans (part of the Southern Pacific system) over U. S. Highway No. 87 in De Witt County 5.4 miles west of Cuero, Tex. The bridge will consist of three I-beam spans 34 ft., 41 ft. and 34 ft. long, with a timber deck, resting on reinforced concrete piers and abutments, supported in turn on treated timber piling. The bridge will cross the highway at an angle of 75 deg. and will provide a 35-ft. horizontal and 14-ft. 6-in. vertical roadway clearance.

SOUTHERN PACIFIC LINES IN TEXAS & LOUISIANA. — Three contracts totalling $169,134 have been awarded for work in connection with the raising of a single track railroad bridge and approaches over Berwick Bay between Berwick, La., and Morgan City.

Contract 1 to W. R. Aldrich & Co. of Baton Rouge, La., in the amount of $24,266, covers the providing of fill and grading of station grounds at Morgan City and Berwick and the construction of embankment for 380 ft. of track; also the widening and raising of the present roadbed embankment to the top of ties for the main line tracks and spurs and sidings for the length of track affected on each side of the bridge; also the construction of concrete retaining walls, the installation of culverts and catch basins and the dismantling of portions of old structures.

Contract No. 2 awarded to Frank Hebert, Lake Charles, La., amounting to $33,058, covers the construction of a 20 ft. by 164 ft. frame and stucco combination freight and passenger station with adjoining platform and ramp and concrete curbing, also two frame and corrugated iron covered platforms, in Morgan City; and the construction of a 16 ft. by 47 ft. frame combination freight and passenger station, adjoining platform, ramp, barrier posts and concrete curbing, and a covered platform, in Berwick; also the dismantling of the existing freight and passenger station facilities at Morgan City and Berwick, the moving of a small frame structure and the raising of a frame operator's house.

Contract No. 3 awarded to the American Bridge Company, Pittsburgh, Pa., in the amount of $111,810 covers the raising, without interruption to railroad traffic, on the existing alignment of the railroad, a single track railroad bridge of six 232-ft. fixed spans, one 268-ft. swing span, one 80-ft. through girder span and one 40-ft. deck girder span, and the reconstruction of three underpasses at existing streets in Berwick and Morgan City. The bridge will be raised four feet.

Certain miscellaneous work, such as raising the tracks, changing signals and telephone lines, etc., will be performed by railroad forces.

TOLEDO, PEORIA & WESTERN.—See item in Financial column.

UNITED STATES BUREAU OF RECLAMATION, Boise, Idaho.—Bids will be received July 28, under specification No. 974 for the construction of earthwork, structures, track and telegraph line for the relocation of the Idaho Northern branch of the Oregon Short Line Railroad (Union Pacific, lessee) from Cascade to Donnelly, Idaho, for the Cascade reservoir, Payette division, Boise project, Idaho. The work includes clearing, grubbing, excavation, rubble-masonry walls, riprap, paving, concrete in structures, placing 50,000 pounds of reinforcement bars; constructing 32 miles of fence; installing 24 right-of-way fence gates; constructing 10 miles of telegraph line; applying 8,500 rail anchors; removing and salvaging material in existing railroad, etc. Materials will be furnished in part by the Government.

Supply Trade

O. W. Carrick, assistant vice-president of the **Electro-Chemical Engineering Corporation,** Chicago, a subsidiary of the Dearborn Chemical Company, has resigned to retire to his home in California.

Edmund R. Walker has been appointed assistant general manager of the **Fedders Manufacturing Company** of Buffalo, N. Y. He was formerly manager of the company's air conditioning division.

Charles F. Fitts, first vice-president of the **Rodger Ballast Car Company,** with headquarters at Chicago, has been elected president of the company, with the same headquarters, succeeding **Harry S. Hart,** whose death on May 27 was noted in the *Railway Age* of May 31.

OBITUARY

Edward H. Dickinson, assistant to the vice-president of sales, American Locomotive Company, died July 9 at his home in Ridgewood, N. J., following a short illness.

George H. Jones, one of the founders of Inland Steel Co., died July 6 in his home in Chicago at the age of 85. In 1893 he joined in organizing Inland Steel Co. Mr. Jones' first position with the company was that of vice-president; he was the chief executive officer and was also in charge of sales. He became the second president in 1898 and served in that capacity until 1906. He served in other executive positions until 1921 and had continued as a director of the company since that time.

Paul J. Simmen, founder and president of the Simmen Automatic Railway Switch & Signal Co., died July 1. He was 69 years of age. Mr. Simmen was born in Switzerland. During his early career he was a division engineer for the Pennsylvania, helped construct the Pittsburgh, Pa., interurban lines and was city engineer of Chico, Cal. He organized his signal company in Indianapolis, Ind., in 1906, moved it to Buffalo, N. Y., in 1914 and then to Eden, N. Y., in 1921. A railway signal engineer and inventor, he held 105 patents including automatic signals, switches and traffic and speed controls.

Otto V. Kruse, general sales manager of the Baldwin Locomotive Works, died at his home in St. Davids, Pa., July 1. He was 54 years of age. Mr. Kruse graduated from Cornell University in 1909 with

Otto V. Kruse

the degree of Civil Engineer. He was active in the hydro-electric industry up to the year of 1917, at which time he became consulting engineer to the Larner Engineering Company and the William Cramp & Sons Ship and Engine Building Co. He was subsequently appointed general sales manager of the miscellaneous machinery business of the Cramp company. In 1931 the Baldwin Locomotive Works acquired this business and Mr. Kruse later became general sales manager and finally assistant manager of the division of this business known as the Baldwin-Southwark Corporation. He became general sales manager of the Baldwin Locomotive Works in 1939.

TRADE PUBLICATION

SAFE USE OF WIRE ROPE.—This is the title of a 24-page illustrated booklet which has been published by the Hazard Wire Rope division of the American Chain & Cable Co., Inc., Wilkes-Barre, Pa. An important feature of this booklet is a set of tables giving breaking strengths for different rope constructions, and to permit safe loads to be determined factors of safety are given for the principal rope applications. Constructive information is also given on the effects of acceleration, the different constructions and grades of wire rope, and various other factors bearing on the safety of wire rope, such as abrasion, bending fatigue, reverse bends, kinking, spooling, crushing, corrosion, porcupined outer wires, rope lubrication, rope attachments, and inspection.

Financial

ALABAMA, TENNESSEE & NORTHERN.—*Reorganization Plan Issued.*—Division 4 of the Interstate Commerce Commission has approved a plan of reorganization for this company under section 77 of the Bankruptcy Act which would reduce the total capitalization from $5,502,637 to $3,572,841. Under the new plan the total annual charges would amount to $114,496, but $73,996 of this amount represents contingent interest on the second mortgage income bonds.

Under the new plan, which would become effective as of January 1, 1941, the following capital structure would be set up:

1. $400,000 of first mortgage bonds or a note secured by such bonds;

2. $1,644,358 of second mortgage income bonds, including $332,175 to be pledged as part security for a contingent interest note of $260,307 to be given to the Reconstruction Finance Corporation;

3. $1,528,483 of common stock of a no par value but taken at $100 a share, including $332,175 to be pledged as part security for the $260,307 note to be given to the R. F. C.

Division 4 found that the equities of the Railroad Credit Corporation and of the holders of general mortgage bonds, and preferred and common stock have no value, and the plan makes no provision for them.

Commissioner Mahaffie concurred in part, saying that he disagreed only with the treatment of the Reconstruction Finance Corporation. "In my judgment," he wrote, "that creditor is entitled to receive outright the securities its collateral calls for." (Under the plan the R. F. C. would receive a contingent interest note for its claim which would be secured by the pledge of second mortgage income bonds and common stock.)

ATLANTIC & NORTH CAROLINA.—*Notes.*—This company has been authorized by Division 4 of the Interstate Commerce Commission to issue its 10-year, three per cent promissory notes for $200,000, the proceeds to be advanced on open account to the Atlantic & East Carolina to assist that company in the purchase and installation of cross ties.

BALTIMORE & OHIO.—*Equipment Trust Certificates.*—This company has asked the Interstate Commerce Commission to amend its order of November 19, 1940, in Finance Docket No. 13,079, so as to permit it to substitute 274 70-ton, 53 ft. 1½ in. all-steel gondola cars in place of 250 70-ton, 66 ft. 1½ in. all-steel gondola cars as originally contemplated.

BOSTON & MAINE.—*Bonds of the Peterborough & Hillsborough.*—The Peterborough & Hillsborough has been authorized by Division 4 of the Interstate Commerce Commission to extend from July 1, 1941, to July 1, 1951, the maturity date of $100,000 of its first mortgage, 4½ per cent bonds, which are held by the Boston & Maine.

CENTRAL OF GEORGIA.—*Abandonment by the Chattahoochee & Gulf.*—The Chattahoochee & Gulf and the Central of Georgia, respectively, would be authorized to abandon a line and the operation thereof, extending from Hartford, Ala., to Lockhart, 48.3 miles, if Division 4 of the Interstate Commerce Commission adopts a recommended order of its Examiner R. Romero.

CENTRAL OF GEORGIA.—*Hearing on Segregation Formula.*—Division 4 has set July 21 as the date for a public hearing in Washington, D. C., on the matter of the formula for segregating and allocating the earnings and expenses of this company between and to the divisions and parts of the railroad or other property which are separately subject to the liens of the various mortgages or deeds of trust, or are separately subject to lease. The proceeding, which is a part of the reorganization proceedings under section 77 of the Bankruptcy Act, will be presided over by Examiners R. T. Boyden and R. A. Porterfield.

CENTRAL OF NEW JERSEY.—*L. & S. Rental Payments.*—The United States district court at Newark, N. J., ruled on June 30 that payments by trustees for this road to the Lehigh Coal & Navigation Co. as rental for the leased Lehigh & Susquehanna are not subject to further litigation and that future rental payments must be made in full until Central trustees decide to adopt or reject the lease. Payments have been made in full to date. Trustees of the Central of New Jersey have been seeking a reduction in the rental figure since the road went into reorganization but have not yet made public any decision to reject the present lease.

CHICAGO & NORTH WESTERN.—*Abandonment.*—This company has asked the Interstate Commerce Commission for authority to abandon a line extending from Sycamore, Ill., to Caledonia, 27.8 miles.

CHICAGO, BURLINGTON & QUINCY.—*Equipment Trust Certificates.*—This company has asked the Interstate Commerce Commission for authority to assume liability for $9,387,000 of 1½ per cent equipment trust certificates, maturing in seven annual installments of $1,341,000 each on August 1 in each of the years from 1942 to 1948, inclusive. The proceeds will be used as part of the purchase price of new equipment costing a total of $11,043,530 and consisting of 2,000 40 ft. 6 in., 50-ton steel frame, double-sheathed box cars with steel outside sheathing; 500 50 ft. 6 in., 50-ton steel frame, double-sheathed box cars with steel outside sheathing; 175 50 ft. 6 in. 50-ton steel frame, double-sheathed automobile cars with steel outside sheathing with auto loaders; 50 29 ft. 3 in., 70-ton all-steel, covered hopper cars; 100 65 ft. 6 in., 70-ton, all-steel gondola cars; 250 34 ft. 3 in., 55-ton, all-steel hopper cars; 400 53 ft. 6 in., 50-ton, all-steel flat cars; 200 40 ft. 6 in., 40-ton steel frame stock cars; and 250 40 ft. 8 in., 70-ton all-steel ballast cars, making a total of 3,925 cars.

CHICAGO, INDIANAPOLIS & LOUISVILLE.—*Compensation of Trustees.*—Division 4 of the Interstate Commerce Commission has ordered that L. F. DeRamus and Holman D. Pettibone, respectively, should be paid at the rate of $24,000 and $12,000 per year as trustees of this company in reorganization proceedings under section 77 of the Bankruptcy Act.

DENVER & RIO GRANDE WESTERN.—*Abandonment.*—Commissioner Porter, acting for the Interstate Commerce Commission, has further extended to August 1, the effective date of its order in Finance Docket No. 12829, wherein this company was authorized to abandon its narrow-gage line extending from Antonito, Colo., to Santa Fe, N. Mex., 125 miles. The announcement from the commission stated that the action was taken upon further consideration of the record and upon consideration of the petition of the Brotherhood's Rail Service Organization for reopening of the record to permit the inclusion of the record and report of the Senate interstate commerce subcommittee, which had recommended against granting the abandonment.

ERIE.—*Acquisition and Securities.*—In order to carry out a final plan of reorganization under section 77 of the Bankruptcy Act, this company has asked the Interstate Commerce Commission for authority to purchase the Chicago & Erie and to assume liability for the following securities:

1. $12,000,000 of first mortgage five per cent bonds of the Chicago & Erie due May 1, 1982, and so much of the principal amount of income mortgage bonds of the Chicago & Erie as remain outstanding with the public, which will not exceed $10,000, payable on or before October 1, 1982, with interest thereon when due at a rate not to exceed five per cent per year, which is non-cumulative;

2. $50,000,000 of consolidated mortgage four per cent bonds of the Chicago & Western Indiana, due July 1, 1952;

3. $24,462,000 of series D, first and refunding 4½ per cent bonds of the Chicago & Western Indiana, due September 1, 1962;

4. $5,488,000 of series A, first and refunding mortgage 5½ per cent bonds, due September 1, 1962; and

5. $98,000 of series C, first and refunding mortgage 5½ per cent bonds, due September 1, 1962.

GULF, MOBILE & OHIO.—*Equipment Trust Certificates.*—This company has asked the Interstate Commerce Commission for authority to assume liability for $2,175,000 of 2.4 per cent equipment trust certificates, maturing in 15 equal annual installments of $145,000 on August 1 in each of the years from 1942 to 1956, inclusive. The proceeds will be used as a part of the purchase price of new equipment costing a total of $2,853,000 and consisting of 800 40-ton, 40 ft. 6 in. box cars; 150 50-ton, twin, self-clearing hopper cars; and 50 40-ton, 40 ft. 6 in. automobile box cars.

ILLINOIS CENTRAL.—*Equipment Trust Certificates.*—This road on July 9, awarded a $6,920,000 issue of equipment trust certificates to Halsey, Stuart & Co., on a bid of 98.7579 for 2s. The certificates were reoffered to the public at prices to yield 0.20 to 2.65 per cent, according to maturity.

NASHVILLE, CHATTANOOGA & ST. LOUIS.—*Equipment Trust Certificates.*—This company has been authorized by Division 4 of

the Interstate Commerce Commission to assume liability for $4,290,000 of 2⅛ per cent serial equipment trust certificates, maturing in 10 equal annual installments of $429,000 on July 15 in each of the years from 1942 to 1951, inclusive. The issue has been sold at 100.17 to the Equitable Securities Corporation, making the average annual cost to the company approximately 2.09 per cent.

NEW YORK CENTRAL.—*Equipment Trust Certificates.*—This company has been authorized by Division 4 of the Interstate Commerce Commission to assume liability for $15,000,000 of 2¼ per cent equipment trust certificates, maturing in 10 equal annual installments of $1,500,000 on July 15 in each of the years from 1942 to 1951, inclusive. The issue has been sold at 100.539 to Salomon Brothers & Hutzler, acting on behalf of itself and Dick & Merle-Smith and Stroud & Co., Inc., making the average annual cost to the company approximately 2.14 per cent.

NEW YORK, NEW HAVEN & HARTFORD.—*Equipment Trust Certificates.*—This company has been authorized by Division 4 of the Interstate Commerce Commission to assume liability for $2,890,000 of 1¾ per cent equipment trust certificates, maturing in 10 equal annual installments of $289,000 on July 1 in each of the years from 1942 to 1951, inclusive. The issue has been sold at 99.3612 to Gregory & Son, Inc., making the average annual cost to the company approximately 1.88 per cent.

PENNSYLVANIA.—*Acquisition of Control of Wabash.*—The Interstate Commerce Commission has denied a motion of the Boston Port Authority asking the commission to issue subpoenas to various officials of this company and the Pennroad Corporation in an effort to determine what control, if any, the Pennsylvania has over the affairs of Pennroad. The motion was made at a recent hearing before the commission on the request of this company to acquire control of the Wabash through the purchase of its capital stock, details of which were given in the *Railway Age* of June 21, page 1125.

SAND SPRINGS.—*Deficit Status.*—Division 4 of the Interstate Commerce Commission has found that this company earned a net railway operating income in excess of 5¾ per cent per year on the value of its property and is not entitled to reimbursement under the provisions of section 204 of the Transportation Act of 1920, as amended January 7, 1941, for any losses suffered during the period of federal control. Division 4 found that the period of private operation was 20 months, which would entitle the company to earn income at the rate of 9.58 per cent for the period, whereas it earned at the rate of 14.37 per cent. An order was entered dismissing the carrier's claim.

SPOKANE INTERNATIONAL. — *Securities and Acquisition.*—The reorganization managers of the Spokane International Railway, the old company, have asked the Interstate Commerce Commission for authority to issue on behalf of the new company, the Spokane International Railroad, the following new securities:

(1) $2,846,400 of 4½ per cent income bonds, to be dated February 1, 1940, and to mature January 1, 2013; and

(2) 28,464 shares of common stock without par value.

At the same time the reorganization managers have sought authority for the old company and the bankruptcy trustee to transfer the property to the new company and for the new company to acquire the lines of the old company, thus completing the reorganization under section 77 of the Bankruptcy Act.

TEXAS, OKLAHOMA & EASTERN.—*Stock.*—This company has been authorized by Division 4 of the Interstate Commerce Commission to issue 200,000 shares of common capital stock of a par value of one dollar to be exchanged for a like number of shares of common capital stock of the same par value which were issued without the authorization of the commission, of which 198,705 shares are in the hands of the public and 1,295 shares are in the company's treasury.

TOLEDO, PEORIA & WESTERN.—*Construction and Abandonment.*—This company has asked the Interstate Commerce Commission for authority to construct a new line extending from a point 2½ miles east of Mapleton, Ill., to a point one mile west of Glasford, a total of nine miles. The purpose of the new construction is the reduction and improvement of grades.

At the same time the company has asked authority to abandon its present line from Mapleton, Ill., to Glasford, 3.6 miles.

WICHITA FALLS & SOUTHERN.—*R. F. C. Loan.*—Division 4 of the Interstate Commerce Commission has approved a plan whereby the time of payment of $250,000 of a loan of $350,000 made by the Reconstruction Finance Corporation to this company, maturing July 1, 1941, would be extended conditionally as follows: $50,000 to mature not later than July 1, 1942; $50,000 to mature not later than July 1, 1943; and $150,000 to mature not later than July 1, 1944.

WILKES-BARRE & EASTERN.—*Compensation.*—Division 4 of the Interstate Commerce Commission has ordered that Joseph P. Jennings, trustee, and Leo W. White, counsel, be paid at the rates of $3,600 and $3,000 a year, respectively, for a period of three months beginning June 1, or until such earlier date as the trustee and his counsel are duly discharged of further responsibility under section 77 of the Bankruptcy Act, upon the condition that such maximum limits shall not be effective beyond August 31, unless specifically authorized by the commission.

Average Prices of Stocks and Bonds

	July 8	Last week	Last year
Average price of 20 representative railway stocks..	29.88	28.85	27.73
Average price of 20 representative railway bonds..	64.93	64.19	56.57

Dividends Declared

Louisville, Henderson & St. Louis.—Common, $4.00, semi-annually; 5 Per Cent Non-Cumulative Preferred, $2.50, semi-annually, both payable August 15 to holders of record August 1.

Pittsburgh, Cincinnati, Chicago & St. Louis.—$2.50, semi-annually, payable July 19 to holders of record July 10.

Railway Officers

EXECUTIVE

Ernest L. King, who has been promoted to assistant to the vice-president in charge of operations of the Southern Pacific, as reported in the *Railway Age* of July 5, was born at Dixon, Cal. on August 16, 1875, and entered railway service in 1894 as a clerk-telegrapher on the Southern

Ernest L. King

Pacific. After serving as a clerk to the assistant superintendent, station agent, telegrapher, train dispatcher, chief train dispatcher and trainmaster of this road, he was promoted to superintendent of telegraph of the Pacific system, at San Francisco in February 1914. In October 1920 he was made superintendent of the Salt Lake division at Ogden, Utah, and in the following year was transferred to the Portland division with headquarters at Portland, Ore., the position he was holding at the time of his recent appointment.

FINANCIAL, LEGAL AND ACCOUNTING

F. H. Jeffrey, auditor of station accounts of the Chicago, Milwaukee, St. Paul & Pacific, has been promoted to assistant treasurer for the trustees, with headquarters as before at Chicago, succeeding **Roy P. Rockefeller,** whose death on June 22 was reported in the *Railway Age* of June 28. **William Kruckstein,** ticket auditor, has been advanced to auditor of passenger and station accounts, with headquarters at Chicago.

OPERATING

G. E. Mallery, supervisor of wage schedules for the Chicago, Rock Island & Pacific, has been promoted to general supervisor of wage schedules, a newly created position, with headquarters as before at Chicago.

Thomas M. Milligan, superintendent of the Joliet division of the Elgin, Joliet & Eastern, with headquarters at Joliet, Ill.,

has been promoted to general superintendent, a newly created position, with the same headquarters, and **J. F. McDonald,** trainmaster at Joliet, has been promoted to superintendent of the Joliet division, succeeding Mr. Milligan.

H. A. Heydt, yardmaster on the Atchison, Topeka & Santa Fe at Albuquerque, N. M., has been promoted to trainmaster at Clovis, N. M., a newly created position, with jurisdiction over a portion of the territory formerly under the jurisdiction of **C. F. Abrams,** who continues as trainmaster in charge of the Clovis terminal and the Roswell and Carlsbad districts.

W. L. Hancock, car accountant of the Louisiana & Arkansas, has been promoted to superintendent of car service, with jurisdiction over both the Kansas City Southern and Louisiana & Arkansas lines, and with headquarters as before at Shreveport, La. **Clarence Gibbs,** trainmaster at Pittsburg, Kan., has been promoted to superintendent of the Northern division of the Kansas City Southern, with the same headquarters, and **Fred H. Hooper,** formerly superintendent of the entire Kansas City Southern lines, with the exception of the Kansas City, Mo., and Port Arthur, Tex., terminals, continues as superintendent of the Southern division. **D. B. James** has been appointed inspector of transportation of the K. C. S. and the L. & A., a newly created position, with headquarters at Shreveport. **Ernest R. Holcomb,** agent at Texarkana, Ark., has been appointed superintendent of the Port Arthur terminal, with headquarters at Port Arthur, succeeding **L. W. McBride,** deceased. **George Stephens** has been appointed trainmaster at Pittsburg, succeeding Mr. Gibbs.

Claude J. Brown, general manager of the Chicago, Rock Island & Pacific, with headquarters at Kansas City, Mo., who had been on a leave of absence because of illness, retired on May 1. Mr. Brown was born at Denison, Tex., on October 14, 1884, and attended business college. He entered railway service in 1901 as a yard clerk on the Missouri-Kansas-Texas, serving in various clerical capacities, as secretary to

Claude J. Brown

the superintendent and as secretary to the general superintendent until 1909. In that year Mr. Brown was appointed trainmaster at Smithville, Tex., later serving as superintendent at the same point. In 1912 he went with the Missouri Pacific as claims assistant at Sedalia, Mo., and after several months in this position he was appointed trainmaster, with headquarters at Illmo, Mo. During the war, Mr. Brown served in France as captain, Eighty-sixth Company, Transportation Corps, United States Army, returning to service on the Missouri Pacific in 1919 as acting division superintendent at Illmo. In 1923 he was appointed assistant superintendent at Sedalia and in the following year he was made superintendent, with headquarters at Falls City, Neb., being transferred to Jefferson City in 1928, and to Osawatomie, Kan., in 1929. In February, 1936, he was appointed general manager of the Rock Island, with headquarters at Kansas City. Mr. Brown has been active in the affairs of the American Association of Railroad Superintendents and in 1937 served as first vice-president of that organization.

TRAFFIC

J. A. Fitzgerald, who has been promoted to general freight agent of the Gulf, Colo-

J. A. Fitzgerald

rado & Santa Fe, as reported in the *Railway Age* of July 5, was born at Palestine, Tex., in 1888 and began his railroad career as a clerk with the Southern Pacific at Houston in 1907. He entered Santa Fe service in 1912 as chief clerk to the railroad's commercial agent at Houston and became traveling freight agent for this company in 1913. He resigned in 1917 to enter the army, and following the war he resumed his former position. In 1927 he was made general agent for the railroad at New Orleans. He was appointed division freight agent at Dallas in 1935 and three years later was promoted to a similar position at Kansas City, Mo. He became assistant general freight agent for the Santa Fe in that city on January 1, 1940 and in May of the same year was appointed general eastern freight agent at New York.

Joseph P. McDonald, coal freight agent of the Lehigh Valley, has been promoted to coal traffic manager, with headquarters as before at New York. Mr. McDonald was born on September 8, 1890, at Wilkes-Barre, Pa., and entered railroad service with the Lehigh Valley on October 29, 1906, as messenger boy in the local freight office at Wilkes-Barre, subsequent-

Joseph P. McDonald

ly serving in various clerical positions. Mr. McDonald was appointed traveling weight agreement inspector in the auditing department at Philadelphia, Pa., on November 1, 1912. After military service from June 5, 1918, to January, 1919, he re-entered the auditing department of the Lehigh Valley as traveling auditor at Philadelphia. On January 1, 1921, Mr. McDonald joined the traffic department as chief clerk to assistant freight traffic manager and was appointed commercial agent in the traffic department at New York on February 1, 1922, later being transferred to Jersey City, N. J., Hoboken and Bayonne. He was promoted to division freight agent at Hazleton, Pa., on April 1, 1924, and on May 1, 1926, was transferred to Wilkes-Barre. Mr. McDonald was appointed division freight and passenger agent at Wilkes-Barre on March 15, 1932, which position he held until his appointment as coal freight agent on January 15, 1937, the position he held until his recent appointment.

Alfred Kubli, district passenger agent of the Central of New Jersey at Newark, N. J., has been promoted to general eastern passenger agent at New York, to succeed **Grant D. Ginder,** who retired on May 1 after more than 50 years of service.

Charles M. Indra, traveling freight agent of the New York Central, with headquarters at Milwaukee, Wis., has been appointed general agent of the Chicago Junction, the Chicago River and Indiana and the Indiana Harbor Belt, with headquarters at Chicago.

A. L. Webb, commercial agent for the Missouri Pacific at Birmingham, Ala., has been promoted to general agent at San Antonio, Tex., succeeding **F. L. Evans,** who has been transferred to Beaumont, Tex. Mr. Evans relieves **E. M. Weinberger,** who has been transferred to Galveston, Tex., replacing **J. W. Daley,** deceased.

R. C. Hopkins, division freight agent on the New York Central, has been appointed assistant general freight agent, with headquarters as before at Syracuse, N. Y., succeeding **T. M. Shalloe,** who has been transferred to Albany, N. Y., to suc-

ceed **F. E. McGrath,** who has been transferred to Boston, Mass. **E. E. Lindauer** has been appointed general agent at New York.

David W. Johnston, assistant general freight agent on the Canadian Pacific, with headquarters at Montreal, Que., has been appointed special freight traffic representative, with the same headquarters, succeeding **W. C. Bowles,** who retired on pension on July 1, after more than 49 years of service. **William Boyd Hayward,** chief of the tariff and division bureaus, at Montreal, has been appointed assistant general freight agent at Montreal, succeeding Mr. Johnston. **Willard M. Jamieson,** chief clerk in general freight agent's office, has been appointed chief of the tariff and division bureaus, succeeding Mr. Hayward.

ENGINEERING AND SIGNALING

R. W. Marye, principal assistant engineer of the Atlantic Coast Line, with headquarters at Wilmington, N. C., has been promoted to assistant chief engineer, with the same headquarters. **R. L. Groover,** engineer of design, has been promoted to principal assistant engineer, with headquarters as before at Wilmington, succeeding Mr. Marye.

Charles H. Blackman, assistant chief engineer of the Louisville & Nashville, has been promoted, effective July 1, to chief engineer, with headquarters as before at Louisville, Ky. A biographical sketch of Mr. Blackman's career, and a photograph were published in the *Railway Age* of March 15 following his promotion to assistant chief engineer on March 1. Mr. Blackman succeeds **G. R. Smiley,** whose death on June 10 was reported in the *Railway Age* of June 14.

MECHANICAL

Frank C. Watrous, whose appointment as superintendent of the transportation and mechanical departments of the Pittsburg

Frank C. Watrous

& Shawmut, with headquarters at Kittanning, Pa., was reported in the *Railway Age* of July 5, was born in Sheridan, Ohio. Mr. Watrous entered railroad service with the Erie as hostler and locomotive fireman at Bradford, Pa., later being employed as a fireman on the Chicago, Rock Island & Pacific. He then served with the Pittsburg, Shawmut & Northern as trainman, with the Erie as engineer on the Bradford division, and with the Pittsburg, Shawmut & Northern as engineer. He went with the Pittsburg & Shawmut as engineer when that road started independent operation on September 1, 1916, remaining with that road ever since. On January 10, 1918, he was appointed road foreman of engines and on November 1, 1925, went back to engine service at his own request. Mr. Watrous was appointed trainmaster and road foreman of engines last January, the position he held until his recent promotion to superintendent of the transportation and mechanical departments.

Mathew Roy Benson, whose promotion to superintendent of equipment of the

Mathew Roy Benson

Michigan Central, with headquarters at Detroit, Mich., was reported in the *Railway Age* of July 5, was born at St. Thomas, Ont., on May 31, 1889, and entered railway service on July 10, 1906, as an apprentice in the shops of the Michigan Central at St. Thomas. On December 1, 1906, he was appointed a machinist apprentice in the locomotive shops, and four years later he was appointed a machinist. From March 30, 1911, to May 3, 1913, Mr. Benson worked for several automobile industries at Detroit, and on the Canadian Pacific, returning to the Michigan Central on the latter date as a machinist. On October 1, 1913, he was promoted to piece work inspector, and on April 1, 1916, he was appointed wrecking shop foreman. Five months later he was appointed chief piece work inspector, and on October 1, 1920, he was advanced to general foreman. Mr. Benson was promoted to superintendent of shops at Jackson, Mich., on April 16, 1925, and on February 1, 1926, he was appointed master mechanic at St. Thomas. On February 1, 1941, he was further advanced to assistant superintendent of equipment, with headquarters at Detroit, which position he held until his recent promotion, effective July 1.

L. B. Johnson, general foreman of the locomotive department of the Atchison, Topeka & Santa Fe at Clovis, N. M., has been promoted to master mechanic of the Panhandle & Santa Fe, with headquarters at Slaton, Tex., succeeding **W. W. Lyons,** who has been transferred to the A. T. & S. F. at Clovis. Mr. Lyons relieves **H. D. Eddie,** who has been transferred to Winslow, Ariz., replacing **P. J. Danneberg,** whose transfer to Argentine, Kan., was reported in the *Railway Age* of July 5.

C. S. Burns, division master mechanic on the Canadian Pacific at Montreal, Que., has been transferred to the Smiths Falls (Ont.) division, succeeding **N. R. Hay,** transferred.

OBITUARY

Harry Alfred Lane, chief engineer of the Baltimore & Ohio, with headquarters at Baltimore, Md., died at the Union Memorial hospital in that city on June 21 at the age of 66. Mr. Lane was born at Foxboro, Mass., on July 30, 1874, and attended Tufts College, receiving the degree of bachelor of science in civil engineering in 1897 and master of science in civil engineering in 1905. He entered railroad service as rodman on the engineering corps of the New York, New Haven & Hartford, serving during summer vacations of 1895 and 1896. From June to September, 1897, Mr. Lane was employed by the Metropolitan Water Board, Boston, Mass. From October, 1897, to January, 1898, he served as rodman on general surface line work for the West End street railway, Boston, and from January to September, 1898, he was transitman in the maintenance of way department of the Fitchburg railroad (now Boston & Maine) at Fitchburg, Mass. From September, 1898, to June, 1899, he was with the Foxboro (Mass.) Electric Company. Mr. Lane went with the New York, New Haven & Hartford in June, 1899, where he served as transitman, assistant to resident engineer and assistant engineer in charge of grade crossing elimination work. In December, 1902, he went with the Baltimore & Ohio, serving successively as office assistant on location surveys, field engineer, assistant

Harry Alfred Lane

engineer, assistant to chief engineer maintenance of way, assistant engineer of surveys, and assistant to chief engineer. In April, 1917, Mr. Lane became chief engineer of the Baltimore & Ohio, which position he held until his death.

Table of Revenues and Expenses begins on next left-hand page

REVENUES AND EXPENSES OF RAILWAYS

MONTH OF MAY AND FIVE MONTHS OF CALENDAR YEAR 1941

Name of road		Av. mileage operated during period	Operating revenues: Freight	Passenger	Total (inc. misc.)	Operating expenses: Maintenance of Way and structures	Maintenance of Equipment	Traffic	Transportation	Total	Operating ratio	Net from railway operation	Operating income	Net railway operating income 1941	Net railway operating income 1940
Akron, Canton & Youngstown	May	171	$248,116	$36	$263,458	$28,004	$24,598	$14,468	$65,215	$141,981	53.9	$121,477	$88,356	$68,152	$32,735
	5 mos.	171	1,160,972	168	1,217,456	134,772	115,657	69,853	329,772	699,302	57.4	518,154	390,618	309,277	170,502
Alton	May	959	1,189,404	226,256	1,647,767	221,264	258,615	48,106	622,691	1,222,095	74.2	425,672	335,308	150,513	—110,125
	5 mos.	959	5,371,979	1,167,011	7,607,293	859,742	1,218,222	230,181	3,021,805	5,690,579	74.8	1,916,714	1,408,688	501,952	—298,997
Atchison, Topeka & Santa Fe System	May	13,431	14,831,447	1,587,302	17,877,267	2,687,275	3,473,011	503,068	5,840,190	12,870,291	72.0	5,006,976	2,862,611	2,865,723	631,637
	5 mos.	13,431	62,873,623	8,125,432	77,548,325	10,650,063	16,723,391	2,411,658	27,248,408	58,910,208	76.0	18,638,117	10,302,368	10,501,201	2,846,736
Atlanta & West Point	May	93	138,836	27,235	191,257	21,552	32,106	9,148	75,660	149,970	78.4	41,287	19,831	4,680	—11,381
	5 mos.	93	668,105	149,351	939,809	93,331	140,241	44,063	364,186	697,870	74.3	241,939	148,341	65,071	—21,945
Western of Alabama	May	133	135,585	28,533	184,200	26,688	36,645	8,493	67,184	148,550	80.6	35,650	12,211	12,149	9,474
	5 mos.	133	646,654	153,488	898,668	122,021	170,165	41,542	329,150	712,026	79.2	186,642	90,662	82,401	33,802
Atlanta, Birmingham & Coast	May	639	322,344	12,894	356,243	48,631	63,866	25,417	142,032	295,256	82.9	60,987	36,292	2,456	—24,038
	5 mos.	639	1,469,243	188,294	1,765,045	260,969	291,152	124,367	704,872	1,466,490	83.1	298,555	176,132	15,916	—111,106
Atlantic Coast Line	May	5,097	4,431,404	793,476	5,718,760	462,542	925,117	159,395	1,959,167	3,714,479	65.0	2,004,281	1,404,281	1,165,762	—193,767
	5 mos.	5,098	20,886,946	6,096,309	29,547,861	2,288,139	4,648,403	855,005	10,151,725	19,182,740	64.9	10,365,121	7,215,121	6,068,687	1,349,274
Charleston & Western Carolina	May	343	295,640	3,021	304,617	29,832	37,800	10,077	84,980	168,189	55.2	136,428	101,428	90,371	47,459
	5 mos.	343	1,329,813	9,087	1,366,543	134,414	177,692	47,352	404,995	792,735	58.0	573,808	398,808	374,734	186,080
Baltimore & Ohio	May	6,370	17,891,618	1,127,742	20,091,903	1,698,105	4,246,068	432,566	6,042,772	13,046,166	64.9	7,045,737	5,999,748	5,702,705	2,958,943
	5 mos.	6,379	75,248,811	5,147,111	85,019,184	7,804,053	19,811,807	2,065,641	28,237,990	60,879,852	71.6	24,139,332	19,059,201	17,315,478	9,535,548
Staten Island Rapid Transit	May	24	74,337	69,839	155,698	13,238	20,022	1,029	76,560	122,305	78.6	33,393	7,701	—1,405	—24,110
	5 mos.	24	329,570	332,095	706,546	66,769	107,626	5,599	394,649	632,408	89.5	74,138	—52,884	—96,697	—133,262
Bangor & Aroostook	May	603	512,929	16,382	549,449	90,641	78,825	4,523	127,541	323,002	58.8	226,447	153,978	174,700	105,782
	5 mos.	603	2,754,684	96,166	2,942,382	421,081	455,123	25,519	704,994	1,723,592	58.5	1,218,790	860,602	877,543	769,824
Bessemer & Lake Erie	May	216	2,247,703	707	2,263,111	132,740	362,854	12,803	287,107	827,934	36.6	1,435,177	1,004,504	1,090,666	916,995
	5 mos.	216	6,545,931	3,449	6,609,447	639,314	1,724,228	61,307	1,126,035	3,723,869	56.3	2,885,578	1,944,344	2,360,431	1,203,971
Boston & Maine	May	1,906	3,939,322	569,441	5,025,660	511,952	661,894	62,445	1,689,459	3,093,437	61.6	1,932,223	1,353,502	1,091,228	509,455
	5 mos.	1,906	17,249,133	3,030,635	22,780,432	2,597,154	3,113,181	332,037	8,386,829	15,248,135	66.9	7,532,297	5,251,771	3,926,954	2,193,903
Burlington, Rock Island	May	255	91,245	21,237	120,475	17,086	12,944	4,351	41,513	86,594	71.9	33,881	24,503	17,194	—8,910
	5 mos.	255	344,930	94,733	480,049	83,511	73,055	22,452	216,820	446,758	93.1	33,291	—13,543	—40,515	—55,612
Cambria & Indiana	May	37	178,733	.....	178,825	12,032	59,434	553	15,591	93,338	52.19	85,487	17,307	79,395	54,422
	5 mos.	37	685,812	.....	686,344	36,596	306,450	2,208	68,302	443,474	64.61	242,870	29,442	328,950	434,224
Canadian Pacific Lines in Maine	May	234	294,064	11,121	319,871	40,659	46,318	6,502	91,653	191,500	59.9	128,371	113,347	92,506	13,081
	5 mos.	234	1,932,467	68,422	2,070,437	142,977	319,085	32,509	678,472	1,202,563	58.1	867,874	802,972	654,667	463,727
Canadian Pacific Lines in Vermont	May	91	82,719	3,994	98,359	17,428	27,210	2,163	77,998	128,004	130.1	—29,645	—37,446	—57,875	—49,933
	5 mos.	91	449,572	34,138	535,406	62,824	114,518	11,100	360,232	564,066	105.4	—28,660	—63,207	—169,309	—191,581
Central of Georgia	May	1,863	1,443,031	154,422	1,775,103	197,386	311,898	56,807	647,686	1,297,223	73.1	477,880	355,938	334,901	36,070
	5 mos.	1,863	6,786,774	814,251	8,449,693	908,904	1,501,393	275,770	3,214,991	6,332,885	74.9	2,116,808	1,515,475	1,372,767	74,756
Central of New Jersey	May	711	2,993,891	359,068	3,559,727	354,472	723,444	46,716	1,239,627	2,457,371	69.0	1,102,356	719,269	609,256	68,664
	5 mos.	711	13,619,963	1,712,141	16,313,975	1,493,246	3,715,295	220,609	6,400,694	12,283,661	75.3	4,030,314	1,923,421	1,035,476	414,799
Central Vermont	May	422	653,535	17,712	711,908	79,290	84,031	11,817	269,306	459,983	64.6	251,925	217,760	161,359	100,740
	5 mos.	422	2,735,393	151,199	3,067,279	317,014	468,025	56,065	1,235,121	2,167,648	70.7	899,631	769,278	534,241	302,147
Chesapeake & Ohio	May	3,124	12,602,031	412,877	13,485,035	1,128,084	2,072,837	209,795	2,800,472	6,513,319	48.3	6,971,716	4,819,218	4,833,174	4,146,141
	5 mos.	3,119	48,725,363	1,677,933	52,138,950	5,496,853	10,191,803	1,032,483	12,444,175	30,642,669	58.8	21,496,281	13,771,583	14,114,212	16,448,793
Chicago & Eastern Illinois	May	925	1,181,521	187,791	1,552,166	177,982	249,862	57,082	542,585	1,091,050	70.3	461,116	351,116	209,633	—45,998
	5 mos.	925	5,821,532	776,000	7,417,245	800,479	1,253,806	293,284	2,704,767	5,382,874	72.6	2,034,371	1,564,371	919,500	32,520
Chicago & Illinois Midland	May	131	404,449	663	425,712	45,669	61,800	20,349	96,437	244,457	57.4	181,255	117,509	118,223	88,133
	5 mos.	131	1,765,683	3,153	1,850,304	195,232	306,205	109,696	464,230	1,170,811	63.3	679,493	441,684	425,039	395,477
Chicago & North Western	May	8,319	7,374,498	992,434	9,272,154	1,185,820	1,707,825	198,383	3,174,254	6,600,370	71.2	2,671,784	1,852,977	1,674,695	673,568
	5 mos.	8,319	31,112,003	4,597,463	39,954,668	5,029,415	7,411,160	969,579	15,061,865	30,072,507	75.3	9,882,161	6,352,665	5,391,454	—72,292
Chicago, Burlington & Quincy	May	8,958	7,268,407	788,789	9,046,766	1,860,968	1,589,028	274,478	3,028,686	7,031,344	77.7	2,015,422	819,226	614,080	—345,436
	5 mos.	8,958	34,002,820	3,813,863	42,370,554	5,564,721	7,361,786	1,251,368	14,938,346	30,584,943	72.2	11,785,611	7,747,306	6,318,991	2,291,619
Chicago Great Western	May	1,502	1,660,453	33,867	1,810,589	196,987	240,766	59,070	604,610	1,157,474	63.9	653,115	479,674	277,804	83,306
	5 mos.	1,502	7,495,615	239,975	8,285,344	904,996	1,174,718	307,772	2,985,524	5,659,756	68.3	2,625,588	1,964,004	1,021,772	246,755
Chicago, Indianapolis & Louisville	May	549	759,564	38,648	876,024	96,262	154,677	27,823	285,400	597,601	68.2	278,423	234,806	144,728	151,127
	5 mos.	549	3,614,018	197,357	4,166,181	368,189	779,603	135,326	1,426,835	2,874,227	69.0	1,291,954	1,062,281	613,669	439,912

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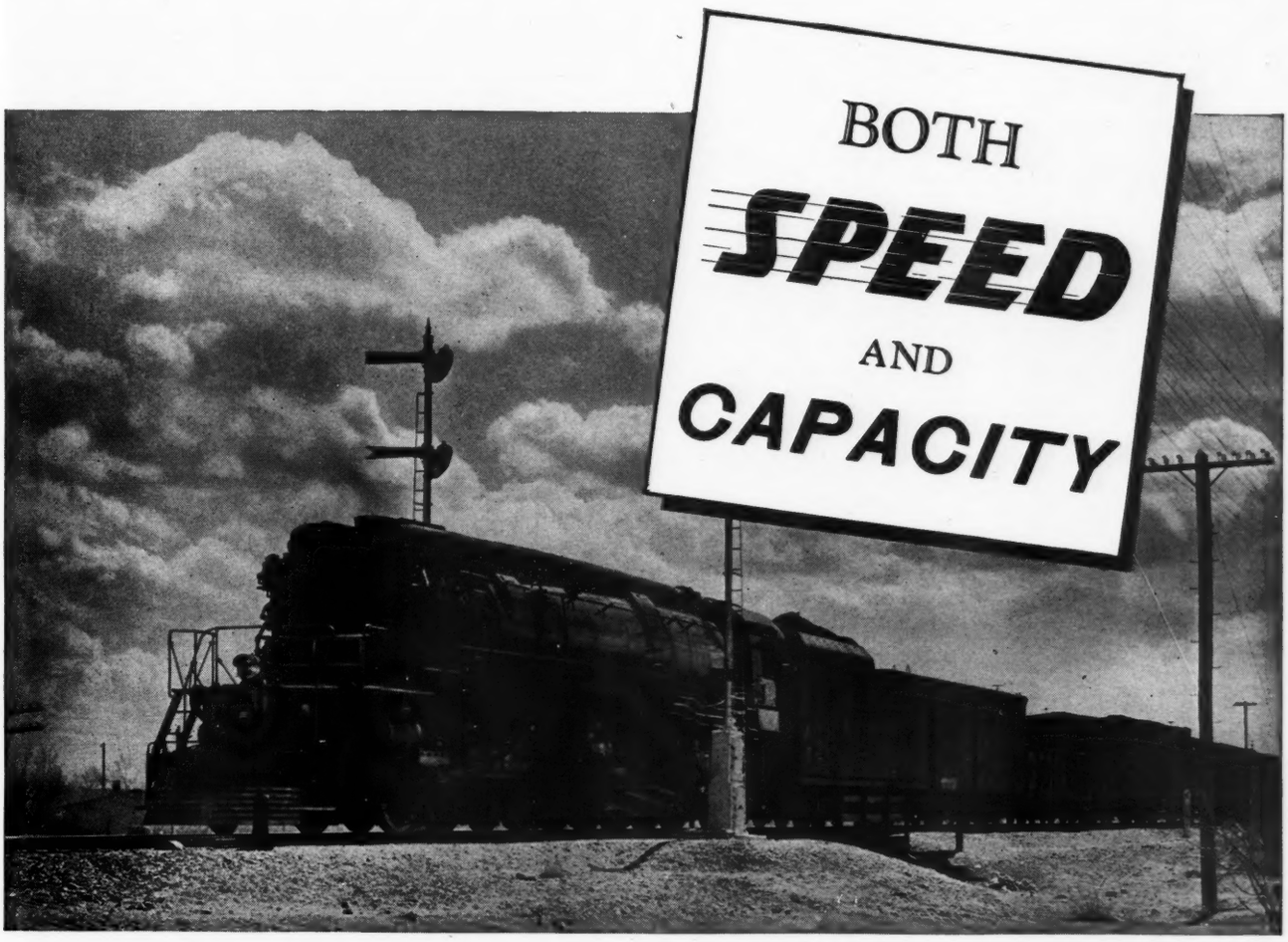

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LIMA LOCOMOTIVE WORKS, INCORPORATED, LIMA, OHIO

REVENUES AND EXPENSES OF RAILWAYS

MONTH OF MAY AND FIVE MONTHS OF CALENDAR YEAR 1941—(CONTINUED)

Name of road		Av. mileage operated during period	Operating revenues: Freight	Passenger	Total (inc. misc.)	Operating expenses: Maintenance of Way and structures	Maintenance of Equipment	Traffic	Transportation	Total	Operating ratio	Net from railway operation	Operating income	Net railway operating income 1941	Net railway operating income 1940
Chicago, Milwaukee, St. Paul & Pacific	May	10,855	$9,398,368	$659,604	$11,194,887	$2,301,407	$1,782,098	$230,631	$3,697,097	$8,384,936	74.9	$2,809,951	$2,048,951	$1,679,255	—$136,441
	5 mos.	10,855	42,382,219	3,432,590	50,580,779	6,257,468	8,742,672	1,112,215	17,832,470	35,894,657	71.0	14,686,122	11,029,122	9,433,243	3,178,002
Chicago, Rock Island & Pacific	May	7,944	6,654,020	723,340	7,979,074	1,138,382	1,320,101	275,715	2,633,202	5,685,883	71.3	2,293,191	1,797,811	1,444,254	286,039
	5 mos.	7,965	29,479,217	4,183,138	36,458,513	3,903,362	6,324,994	1,339,968	12,900,437	26,145,152	71.7	10,313,361	7,855,946	6,185,303	1,184,420
Chicago, St. Paul, Minneapolis & Omaha	May	1,629	1,430,120	116,984	1,666,905	229,412	262,753	40,638	652,388	1,249,611	75.0	417,294	305,313	231,345	—70,506
	5 mos.	1,629	6,199,588	612,317	7,326,062	850,034	1,272,054	196,234	3,319,949	5,966,214	81.4	1,359,848	795,605	281,801	—411,289
Clinchfield Railroad	May	308	926,602	3,071	935,583	57,090	121,563	20,679	163,381	378,711	40.5	556,872	479,652	479,635	288,782
	5 mos.	308	4,328,114	23,055	4,381,295	213,381	623,606	99,199	784,863	1,807,935	41.3	2,573,360	2,188,600	2,219,497	1,762,538
Colorado & Southern	May	754	547,918	42,049	723,778	217,146	125,022	13,513	223,019	605,169	83.6	118,609	58,150	33,415	68,996
	5 mos.	779	2,538,511	201,524	3,077,709	420,654	582,353	65,659	1,079,089	2,282,997	74.2	794,712	461,090	334,485	101,318
Fort Worth & Denver City	May	804	410,928	43,220	530,936	71,584	84,753	18,286	180,900	386,714	72.8	144,222	106,676	56,907	23,625
	5 mos.	804	1,734,555	230,298	2,318,273	296,005	392,997	91,947	819,551	1,756,952	75.8	561,321	380,884	209,328	164,330
Colorado & Wyoming	May	42	90,050	.....	142,637	14,680	12,086	577	44,854	76,562	53.67	66,075	30,698	29,916	32,730
	5 mos.	42	424,984	.....	667,390	35,770	54,680	2,876	219,640	334,866	50.17	332,524	191,111	188,502	175,476
Columbus & Greenville	May	168	92,948	3,098	103,243	14,241	19,300	5,620	35,007	84,339	81.7	18,904	8,012	9,909	543
	5 mos.	168	466,739	14,611	512,296	67,061	80,312	24,922	174,262	414,172	80.5	100,124	44,331	50,788	24,906
Delaware & Hudson	May	849	2,648,112	55,086	2,791,289	317,099	481,583	40,577	882,426	1,809,225	64.8	982,064	823,005	760,287	453,888
	5 mos.	849	11,598,841	350,091	12,373,359	1,283,937	2,351,283	202,514	4,342,888	8,616,240	69.6	3,757,119	2,971,799	2,720,193	1,948,153
Delaware, Lackawanna & Western	May	995	4,223,151	517,059	5,243,433	314,549	910,219	113,514	2,010,800	3,484,459	66.5	1,758,974	1,083,174	1,019,461	569,560
	5 mos.	995	18,545,781	2,592,469	23,457,360	1,278,219	4,266,278	556,686	9,870,282	16,727,037	71.3	6,730,323	4,279,023	4,101,217	2,220,184
Denver & Rio Grande Western	May	2,547	1,991,292	101,316	2,207,284	456,977	573,113	85,802	791,292	1,999,879	90.6	207,405	—3,632	—27,360	—61,799
	5 mos.	2,548	9,313,242	568,696	10,385,897	1,345,132	2,995,042	415,095	3,786,962	8,990,500	86.6	1,395,397	367,155	266,634	—145,574
Denver & Salt Lake	May	232	114,365	3,527	126,452	48,218	42,006	2,651	46,853	149,868	118.5	—23,416	—48,597	4,760	36,970
	5 mos.	232	709,765	25,004	780,964	135,747	212,046	13,275	278,784	688,202	88.1	92,762	—32,116	206,586	360,445
Detroit & Mackinac	May	242	53,605	1,641	62,229	13,177	9,972	850	24,534	51,495	82.7	10,734	6,992	3,626	4,555
	5 mos.	242	206,133	11,552	261,884	45,600	56,375	4,667	121,183	243,210	92.9	18,674	1,776	—13,399	—1,569
Detroit & Toledo Shore Line	May	50	291,102	.....	291,912	38,265	23,716	8,665	76,934	155,212	53.2	136,700	96,980	44,322	42,090
	5 mos.	50	1,793,460	.....	1,797,699	137,125	121,315	43,595	440,258	779,165	43.3	1,018,534	754,540	438,007	431,663
Detroit, Toledo & Ironton	May	472	758,142	280	788,516	58,087	104,509	12,725	157,598	351,483	44.6	437,033	303,330	275,016	143,692
	5 mos.	472	3,803,119	1,066	3,955,009	274,495	500,409	62,787	817,109	1,753,276	44.3	2,201,733	1,547,962	1,354,941	1,219,879
Duluth, Missabe & Iron Range	May	541	3,947,842	1,465	4,567,774	283,982	257,654	4,211	600,240	1,178,074	25.8	3,389,700	2,688,062	2,683,428	1,641,145
	5 mos.	541	7,048,937	10,471	8,149,457	937,281	1,234,700	21,459	1,600,360	3,953,494	48.5	4,195,963	1,556,475	1,538,193	—355,348
Duluth, Winnipeg & Pacific	May	175	113,986	729	117,744	28,462	18,454	2,060	50,347	102,630	87.2	15,114	5,400	—7,818	702
	5 mos.	175	646,801	5,149	667,746	114,237	102,535	10,009	275,326	521,044	78.0	146,702	94,226	4,381	—18,427
Elgin, Joliet & Eastern	May	390	2,140,933	.....	2,441,546	189,409	331,439	15,038	758,738	1,334,597	54.7	1,106,949	774,746	623,028	266,140
	5 mos.	390	10,062,535	11	11,511,105	830,898	1,623,467	75,908	3,838,131	6,569,657	57.1	4,941,448	3,491,239	2,724,183	1,347,240
Erie	May	2,257	7,941,798	371,904	8,891,810	731,405	1,461,154	188,859	3,041,853	5,691,370	64.0	3,200,440	2,360,775	2,008,580	986,759
	5 mos.	2,260	36,054,952	1,802,528	40,350,542	2,823,303	7,129,320	911,136	14,793,076	27,006,920	66.9	13,343,622	9,735,807	8,157,262	3,989,718
Florida East Coast	May	685	606,342	201,931	905,515	151,968	171,071	27,023	287,600	688,522	76.0	216,993	142,913	61,560	116,400
	5 mos.	685	3,139,645	2,419,655	6,235,053	616,807	816,672	161,934	1,964,311	3,954,370	63.4	2,280,683	1,892,485	1,464,488	1,303,566
Georgia Railroad	May	329	369,248	26,376	424,969	49,168	68,165	19,268	157,916	309,298	72.8	115,671	99,089	101,639	42,596
	5 mos.	329	1,747,884	108,644	1,992,581	207,264	324,319	94,922	772,771	1,470,163	73.8	522,418	442,776	452,409	216,396
Georgia & Florida	May	408	109,311	1,358	114,562	23,571	17,572	9,129	40,153	95,731	83.6	18,831	10,827	5,496	—13,968
	5 mos.	408	519,418	6,426	545,238	117,494	88,148	44,749	199,823	476,719	87.4	68,519	29,168	—2,664	—65,433
Grand Trunk Western	May	1,029	2,357,087	79,579	2,595,835	284,038	431,388	39,975	930,993	1,757,621	67.7	838,214	704,545	560,444	268,244
	5 mos.	1,029	11,430,529	365,161	12,582,694	1,232,851	2,097,535	191,495	4,637,943	8,503,495	67.6	4,079,199	3,416,864	2,800,419	1,529,914
Canadian National Lines in New England	May	172	170,558	1,791	180,871	41,778	10,672	3,121	56,854	120,973	66.9	59,898	43,755	—5,502	—12,213
	5 mos.	172	654,430	12,161	789,842	154,225	99,429	13,712	331,772	654,620	82.9	135,222	54,506	—189,787	—279,458
Great Northern	May	8,074	9,653,414	335,892	10,956,988	1,622,411	1,450,336	234,793	2,711,596	6,267,814	57.2	4,689,174	3,553,294	3,554,235	2,603,113
	5 mos.	8,068	34,283,534	1,590,515	39,024,172	5,537,877	7,651,439	1,005,912	12,426,835	27,863,017	71.4	11,161,155	6,974,358	6,665,018	4,316,715
Green Bay & Western	May	234	170,307	238	176,216	42,543	16,837	8,039	49,553	121,775	69.1	54,441	37,893	29,302	13,999
	5 mos.	234	779,576	1,395	804,517	141,087	82,080	42,608	248,491	540,185	67.1	264,332	185,956	139,976	101,135
Gulf & Ship Island	May	259	127,926	16,906	155,062	23,748	20,054	2,639	53,973	104,986	67.7	50,076	32,491	21,312	—20,969
	5 mos.	259	598,133	70,739	720,525	103,366	98,118	14,541	283,627	523,690	72.7	196,835	110,080	51,966	—75,855

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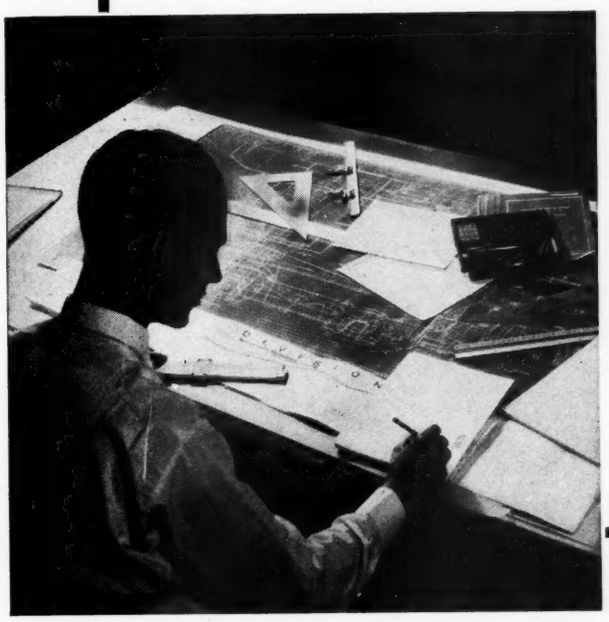
SUPPOSE EVERY RAILROAD HAD ITS OWN ARCH BRICK DESIGN



Look about and see how standards on many items vary with each railroad. « « « Think of the confusion and expense involved if this also applied to Arch Brick. « « « If a road ran short, it would wait for weeks for its special brick to be made! At joint terminals, the confusion would be unendurable. « « « Years ago, American Arch Company foresaw such a situation and fostered the standardization of Arch tubes and of Arch Brick sizes and designs. « « « Think of the grief this good work saved. « « « In everything having to do with Arch Brick, American Arch Company for 32 years has served the railroads. This service has had and still has a high value.

THERE'S MORE TO SECURITY ARCHES THAN JUST BRICK

HARBISON-WALKER REFRACTORIES CO.

Refractory Specialists

AMERICAN ARCH CO.
INCORPORATED
60 EAST 42nd STREET, NEW YORK, N. Y.
Locomotive Combustion Specialists

REVENUES AND EXPENSES OF RAILWAYS

MONTH OF MAY AND FIVE MONTHS OF CALENDAR YEAR 1941—(CONTINUED)

Name of road		Av. mileage operated during period	Operating revenues: Freight	Passenger	Total (inc. misc.)	Operating expenses: Maintenance of Way and structures	Maintenance of Equipment	Traffic	Transportation	Total	Operating ratio	Net from railway operation	Operating income	Net railway operating income 1941	Net railway operating income 1940
Gulf, Mobile & Ohio	May	1,973	$1,791,194	$44,960	$1,911,264	$265,626	$293,118	$83,163	$554,960	$1,296,195	67.8	$615,069	$399,069	$290,741	$162,785
	5 mos.	1,973	8,544,241	225,627	9,125,895	1,213,853	1,397,700	422,655	2,675,967	6,182,925	67.8	2,942,970	1,914,470	1,401,281	599,710
Illinois Central	May	4,951	8,211,375	776,251	9,894,533	1,128,930	2,138,444	206,334	3,276,629	7,087,429	71.6	2,807,104	2,021,456	1,996,089	374,254
	5 mos.	4,950	39,009,710	4,504,559	47,161,575	4,715,316	9,837,093	1,069,813	16,167,784	33,485,158	71.0	13,676,417	9,870,389	9,934,407	4,554,039
Yazoo & Mississippi Valley	May	1,570	1,341,697	70,011	1,506,966	139,629	232,953	31,898	528,309	981,084	65.1	525,882	377,177	325,146	249,546
	5 mos.	1,593	5,935,616	308,571	6,672,133	649,202	1,027,587	165,611	2,589,081	4,666,600	69.9	2,005,533	1,274,189	1,049,587	707,337
Illinois Central System	May	6,521	9,553,072	846,262	1,401,499	1,268,559	2,371,397	238,323	3,804,938	8,068,513	70.8	3,332,986	2,396,514	2,329,148	633,713
	5 mos.	6,543	44,945,326	4,813,130	53,833,708	5,364,518	10,864,680	1,235,424	18,756,865	38,151,758	70.9	15,681,950	11,133,958	11,027,558	5,304,941
Illinois Terminal	May	477	462,746	67,593	591,801	62,881	75,477	17,351	184,938	358,260	60.54	233,541	165,123	142,974	96,156
	5 mos.	477	2,080,648	314,248	2,638,448	265,283	359,940	86,809	877,632	1,679,040	63.64	959,408	674,444	559,271	431,400
Kansas City Southern	May	879	1,290,464	47,204	1,470,846	141,343	226,986	56,920	416,537	910,082	61.9	560,764	447,764	361,151	274,607
	5 mos.	879	6,056,283	249,955	6,937,977	642,933	1,054,720	275,527	1,989,075	4,268,678	61.5	2,669,299	2,116,299	1,735,584	1,395,876
Kansas, Oklahoma & Gulf	May	328	197,973	388	200,527	19,043	9,655	8,725	45,275	91,785	45.8	108,742	84,090	65,458	56,703
	5 mos.	328	982,952	1,957	996,986	67,355	49,102	43,385	222,467	434,540	43.6	562,446	444,692	360,090	338,527
Lake Superior & Ishpeming	May	156	434,102	62	526,238	41,911	26,485	635	66,094	142,081	27.0	384,157	264,183	267,306	271,196
	5 mos.	156	959,015	353	1,152,451	124,677	143,375	3,003	195,859	501,888	43.5	650,563	388,602	408,992	55,125
Lehigh & Hudson River	May	96	187,260	.....	188,631	17,861	30,700	3,662	52,239	110,551	58.6	78,080	49,943	37,608	23,679
	5 mos.	96	828,531	.....	833,994	89,441	139,320	18,667	244,892	522,936	62.7	311,058	193,411	137,227	91,103
Lehigh & New England	May	190	449,926	.....	453,587	35,911	67,578	7,259	126,473	251,995	55.6	201,592	135,398	143,117	104,002
	5 mos.	190	1,810,073	.....	1,825,063	151,661	309,609	36,273	575,631	1,149,783	63.0	675,280	462,635	499,302	442,953
Lehigh Valley	May	1,269	4,356,610	167,127	4,790,493	481,968	732,011	109,931	1,651,883	3,115,821	65.0	1,674,672	1,254,253	1,017,147	636,262
	5 mos.	1,269	19,468,118	812,828	21,524,137	1,581,584	3,326,824	529,278	8,359,313	14,445,590	67.1	7,078,547	5,392,974	4,252,292	2,297,175
Louisiana & Arkansas	May	881	799,320	22,953	856,709	127,931	103,613	29,635	208,783	505,512	59.0	351,197	259,867	191,066	139,029
	5 mos.	881	3,793,945	101,105	4,051,285	634,235	477,796	145,011	981,432	2,384,608	58.9	1,666,677	1,216,441	897,466	650,351
Louisville & Nashville	May	4,865	8,251,002	620,710	9,454,584	908,168	1,750,772	178,221	3,079,063	6,177,624	65.3	3,276,960	1,971,302	2,095,561	1,630,801
	5 mos.	4,866	38,694,335	3,359,654	44,817,621	4,527,392	9,063,870	918,284	14,520,876	30,443,597	67.9	14,374,024	8,456,753	9,046,678	6,391,391
Maine Central	May	991	1,048,670	72,305	1,219,026	153,435	196,582	7,861	396,884	786,613	64.5	432,413	289,467	258,987	187,693
	5 mos.	991	5,295,798	346,830	6,097,877	723,030	969,745	54,707	2,067,241	3,981,769	65.3	2,116,108	1,536,952	1,231,825	865,660
Midland Valley	May	352	89,757	6	91,957	18,342	9,304	2,334	27,725	63,457	69.0	28,500	17,696	11,812	5,866
	5 mos.	352	512,230	22	521,701	60,248	48,320	11,965	150,564	302,539	58.0	219,162	165,180	123,912	128,999
Minneapolis & St. Louis	May	1,409	854,987	7,815	898,178	198,785	124,713	51,167	290,969	699,672	77.9	198,506	147,460	110,148	17,095
	5 mos.	1,409	3,741,383	53,406	3,963,389	676,893	668,293	249,535	1,401,986	3,181,266	80.3	782,123	557,267	369,770	176,220
Minneapolis, St. Paul & Sault Ste. Marie	May	4,271	2,762,274	59,036	3,055,261	578,313	449,943	63,211	1,018,961	2,211,870	72.4	843,391	554,430	470,872	383,020
	5 mos.	4,270	11,072,982	285,421	12,270,633	1,962,732	2,059,865	311,824	4,947,797	9,746,414	79.4	2,524,219	1,456,766	986,854	491,132
Duluth, South Shore & Atlantic	May	550	305,312	5,984	340,110	103,263	44,457	7,021	98,471	259,718	76.4	80,392	63,358	58,846	46,087
	5 mos.	550	1,048,977	34,934	1,171,762	263,684	192,094	36,298	422,359	946,513	80.8	225,249	148,004	137,799	22,275
Spokane International	May	152	77,546	606	84,300	28,299	6,967	2,366	23,685	64,638	76.7	19,662	13,977	10,287	484
	5 mos.	152	301,923	2,729	339,768	88,555	32,891	11,230	109,119	259,984	76.5	79,784	53,359	35,778	11,904
Mississippi Central	May	158	96,839	2,052	100,039	49,540	13,479	8,018	21,157	96,412	96.4	3,627	—2,027	—8,802	—11,034
	5 mos.	158	469,495	17,994	496,140	115,933	59,530	38,545	112,936	347,565	70.1	148,575	106,295	76,789	—10,827
Missouri & Arkansas	May	365	108,501	1,426	116,356	32,602	11,375	7,748	37,388	94,463	81.2	21,893	17,357	6,900	7,749
	5 mos.	365	514,380	6,971	560,627	133,173	59,617	37,602	182,380	438,237	78.2	122,390	100,197	46,196	37,616
Missouri-Illinois	May	193	229,045	196	230,795	30,596	23,335	3,304	54,288	117,762	51.0	113,033	77,483	64,354	40,676
	5 mos.	193	989,255	952	997,445	127,788	104,595	15,983	245,922	517,755	61.9	479,690	322,388	263,408	216,994
Missouri-Kansas-Texas Lines	May	3,293	2,161,595	178,437	2,594,513	426,108	455,050	107,155	982,469	2,092,048	80.6	502,465	331,395	135,133	29,416
	5 mos.	3,293	10,232,086	994,286	12,403,112	1,730,206	2,037,105	535,934	4,640,824	9,564,306	77.1	2,838,806	1,999,145	1,057,966	281,178
Missouri Pacific	May	7,146	7,106,633	671,375	8,582,532	1,149,348	1,580,260	247,833	2,830,715	6,077,049	70.8	2,505,483	2,001,687	1,618,499	434,284
	5 mos.	7,146	34,282,623	3,046,155	40,864,296	5,171,110	7,346,470	1,240,926	14,008,836	29,077,651	71.2	11,786,645	9,291,468	7,360,373	2,497,837
Gulf Coast Lines	May	1,772	1,205,024	39,066	1,325,197	202,000	197,657	44,945	421,460	922,939	69.6	402,258	324,096	227,943	86,511
	5 mos.	1,772	6,726,319	211,119	7,312,778	1,001,759	927,794	219,063	2,148,825	4,566,378	62.4	2,746,400	2,356,212	1,710,906	1,519,187
International Great Northern	May	1,155	973,722	69,810	1,167,932	174,236	193,067	29,061	456,037	908,733	77.8	259,199	194,483	110,028	—53,010
	5 mos.	1,155	4,357,777	402,673	5,340,010	835,590	953,186	144,430	2,119,085	4,327,136	81.0	1,014,874	696,423	319,817	—237,583
Monongahela	May	172	558,772	746	561,751	38,222	29,717	497	107,002	178,245	31.7	383,506	348,346	252,603	120,205
	5 mos.	172	1,958,923	2,896	1,972,146	166,677	141,071	2,477	458,334	784,872	39.8	1,187,274	1,016,957	642,041	642,810

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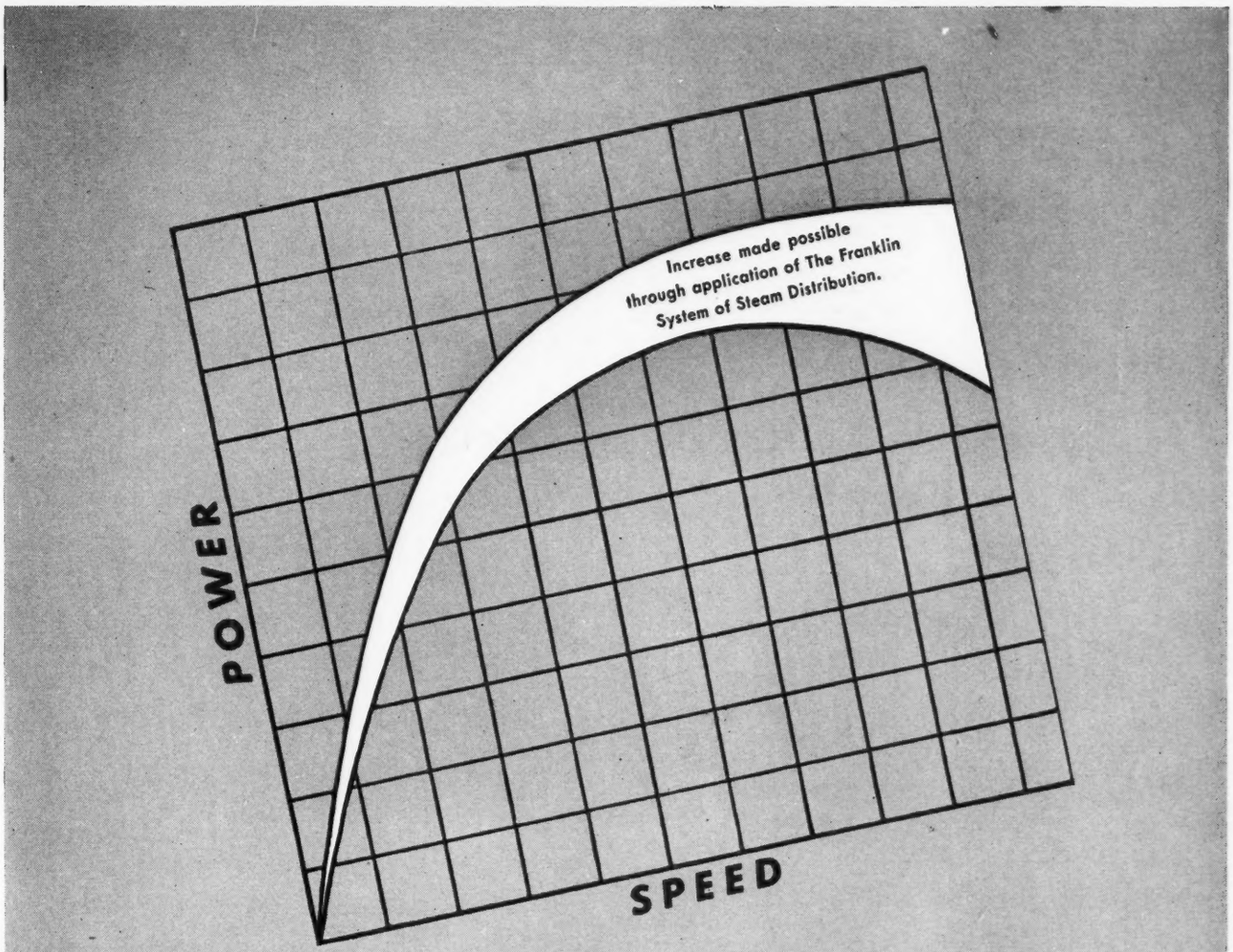

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In Canada: FRANKLIN RAILWAY SUPPLY COMPANY, LIMITED, MONTREAL

REVENUES AND EXPENSES OF RAILWAYS

MONTH OF MAY AND FIVE MONTHS OF CALENDAR YEAR 1941—(CONTINUED)

Name of road		Av. mileage operated during period	Operating revenues: Freight	Passenger	Total (inc. misc.)	Operating expenses: Maintenance of Way and structures	Maintenance of Equipment	Traffic	Transportation	Total	Operating ratio	Net from railway operation	Operating income	Net railway operating income 1941	Net railway operating income 1940
Montour	May	51	$245,070	.....	$245,947	$13,996	$45,419	$722	$49,398	$115,917	47.1	$130,030	$86,705	$90,498	$77,786
	5 mos.	51	769,134	$75	775,940	48,265	211,901	3,642	206,430	502,193	64.7	273,747	136,524	258,948	327,784
Nashville, Chattanooga & St. Louis	May	1,111	1,321,937	126,254	1,600,714	182,995	262,646	68,763	569,292	1,141,869	71.3	458,845	300,709	278,876	136,837
	5 mos.	1,111	6,278,715	661,878	7,657,573	769,614	1,259,217	345,890	2,795,669	5,466,182	71.4	2,191,391	1,475,328	1,279,492	678,775
Nevada Northern	May	165	57,535	677	63,146	9,052	2,414	1,305	11,130	30,337	48.0	32,809	21,187	23,027	29,635
	5 mos.	165	256,547	2,952	282,397	44,643	18,531	6,211	53,941	155,528	55.1	126,869	71,466	82,246	121,743
New York Central	May	10,942	27,676,066	4,931,285	36,717,134	4,035,677	7,518,880	570,191	12,689,914	26,087,383	71.0	10,629,751	6,294,893	5,133,024	2,873,605
	5 mos.	10,943	128,167,499	24,858,513	170,487,940	17,087,354	35,575,594	2,667,985	62,164,198	123,963,243	72.7	46,524,697	28,618,178	22,541,306	12,464,909
Pittsburgh & Lake Erie	May	233	2,568,721	45,577	2,682,268	191,276	703,652	39,823	672,858	1,691,796	63.1	990,472	561,009	879,478	524,434
	5 mos.	233	10,314,823	220,897	10,844,132	900,829	3,489,924	184,198	3,205,516	8,195,092	75.6	2,649,040	1,080,672	2,731,792	1,415,179
New York, Chicago & St. Louis	May	1,704	4,612,680	83,480	4,818,202	422,220	624,998	119,587	1,474,365	2,770,072	57.5	2,048,130	1,590,025	1,259,903	383,332
	5 mos.	1,704	21,716,500	332,053	22,619,909	1,892,819	3,039,880	596,675	7,200,695	13,356,140	59.0	9,263,769	7,282,051	5,623,010	2,743,078
New York, New Haven & Hartford	May	1,852	5,897,971	2,333,581	8,995,048	1,121,569	1,407,051	141,631	3,086,817	6,136,483	68.2	2,858,565	2,244,565	1,495,802	351,626
	5 mos.	1,851	25,574,534	11,332,882	40,662,931	4,561,209	6,405,320	554,610	14,804,096	28,301,764	69.6	12,361,167	9,433,667	5,921,162	2,067,223
New York Connecting	May	21	407,376	.....	421,366	61,200	11,347	.....	40,881	114,928	27.3	306,438	260,772	283,554	73,486
	5 mos.	21	1,763,231	.....	1,820,263	222,068	48,191	.....	168,875	446,297	24.5	1,373,966	1,146,786	1,297,970	498,389
New York, Ontario & Western	May	576	468,560	22,566	542,740	52,528	100,825	22,220	266,792	461,728	85.1	81,012	36,802	—7,456	—77,377
	5 mos.	576	2,029,638	42,827	2,303,735	244,803	487,389	87,679	1,258,676	2,181,575	94.7	122,160	—96,193	—266,871	—447,455
New York, Susquehanna & Western	May	144	271,558	25,169	322,763	24,422	25,019	2,461	103,785	165,377	51.2	157,386	128,189	84,694	19,085
	5 mos.	144	1,299,527	135,283	1,516,370	101,283	126,340	11,951	593,055	882,485	58.2	633,885	485,752	290,906	199,411
Norfolk & Western	May	2,191	10,085,399	275,438	10,606,701	970,447	1,986,134	155,355	1,980,920	5,301,043	50.0	5,305,658	3,147,845	3,265,216	3,011,739
	5 mos.	2,191	41,767,101	1,497,690	44,472,887	4,662,178	9,864,921	737,201	9,497,161	25,791,067	58.0	18,681,820	10,375,591	11,683,391	13,447,094
Norfolk Southern	May	733	418,441	3,700	436,717	77,720	55,031	25,741	150,443	329,494	75.5	107,223	75,013	52,395	—20,929
	5 mos.	733	1,964,663	20,847	2,055,850	381,358	272,200	123,024	725,676	1,614,404	78.5	441,446	281,572	179,632	—101,976
Northern Pacific	May	6,719	5,620,120	326,699	6,481,717	849,310	1,315,172	185,253	2,008,853	4,636,896	71.5	1,844,821	1,193,186	1,531,763	1,168,082
	5 mos.	6,719	24,465,275	1,487,534	28,338,692	3,480,952	5,962,626	820,649	9,861,020	21,491,348	75.8	6,847,344	3,713,609	5,425,430	3,593,287
Northwestern Pacific	May	352	265,476	4,459	285,728	56,130	55,265	2,953	116,310	255,656	89.5	30,072	10,737	—6,283	—41,900
	5 mos.	352	1,086,993	64,467	1,243,535	312,420	225,613	13,556	622,232	1,264,342	101.7	—20,807	—125,032	—200,960	—323,669
Oklahoma City-Ada-Atoka	May	132	23,800	.....	24,269	5,039	654	554	8,414	15,971	65.8	8,298	5,898	2,397	—4,421
	5 mos.	132	108,294	—5	110,333	21,850	6,103	3,338	41,099	79,281	71.9	31,052	19,078	1,803	—10,413
Pennsylvania	May	10,246	40,890,523	6,664,234	51,773,209	5,535,791	11,946,422	745,319	17,575,255	37,152,863	71.8	14,620,346	9,262,242	8,524,570	7,127,268
	5 mos.	10,246	172,255,989	34,089,468	224,565,710	22,637,038	51,559,176	3,547,214	79,751,133	164,216,188	73.1	60,349,522	37,574,385	34,796,392	29,093,672
Long Island	May	379	772,471	1,359,932	2,252,495	208,966	355,634	8,470	953,186	1,565,097	69.5	687,398	327,034	148,585	2,959
	5 mos.	379	3,563,999	6,047,346	10,157,641	1,034,128	1,707,485	41,242	4,754,042	7,729,143	76.1	2,428,498	1,128,105	247,556	—355,830
Pennsylvania-Reading Seashore Lines	May	411	371,208	150,816	555,151	92,109	109,089	7,562	296,681	520,652	93.8	34,499	—53,235	—148,050	—174,497
	5 mos.	411	1,605,688	557,410	2,289,115	444,459	521,668	33,861	1,441,979	2,516,445	109.9	—227,330	—634,466	—1,037,700	—1,120,397
Pere Marquette	May	2,102	3,067,280	83,093	3,334,580	402,387	627,638	68,872	1,116,650	2,315,228	69.4	1,019,352	672,794	562,867	254,308
	5 mos.	2,102	14,600,200	377,026	15,719,388	1,808,432	3,002,323	319,562	5,475,354	11,109,394	70.7	4,609,994	3,187,344	2,652,430	1,702,805
Pittsburg & Shawmut	May	98	98,599	.....	98,763	9,608	17,144	1,743	22,703	55,598	56.3	43,165	40,439	32,032	46,234
	5 mos.	98	368,692	.....	370,260	55,911	89,926	9,616	100,816	277,715	75.0	92,545	79,841	49,833	95,278
Pittsburgh & West Virginia	May	136	434,487	119	450,041	79,203	70,281	18,822	90,601	282,191	62.7	167,850	131,611	129,613	48,835
	5 mos.	136	1,924,040	189	2,024,010	339,829	356,265	91,815	413,957	1,308,721	64.7	715,289	573,775	601,593	377,616
Pittsburg, Shawmut & Northern	May	190	129,363	.....	129,968	16,622	14,520	1,084	41,332	79,111	60.9	50,857	44,672	33,730	12,295
	5 mos.	190	556,310	.....	560,849	69,228	80,493	5,299	181,948	366,564	65.3	194,285	166,534	119,211	98,557
Reading	May	1,438	5,934,465	305,255	6,527,317	564,527	1,305,783	72,980	2,122,270	4,209,597	64.5	2,317,720	1,569,756	1,552,978	1,045,229
	5 mos.	1,438	27,602,099	1,481,214	30,429,941	2,282,120	6,138,561	352,793	10,786,737	20,279,047	66.6	10,150,894	7,028,010	6,510,324	4,832,731
Richmond, Fredericksburg & Potomac	May	118	669,128	315,526	1,125,376	103,438	166,349	9,716	356,206	691,621	61.5	433,755	311,019	215,952	9,750
	5 mos.	118	2,916,147	2,094,147	5,689,274	445,054	839,460	47,190	1,852,630	3,481,351	61.2	2,207,923	1,529,489	1,116,909	399,343
Rutland	May	407	255,127	19,989	333,603	36,533	61,285	9,912	157,005	276,209	82.8	57,394	38,574	39,291	—134,490
	5 mos.	407	1,071,660	120,553	1,473,339	161,424	301,484	52,180	787,424	1,363,126	92.5	110,213	17,101	20,380	—90,191
St. Louis-San Francisco	May	4,769	4,079,743	353,328	4,845,139	638,723	941,452	125,030	1,696,496	3,580,651	73.9	1,264,488	916,047	853,562	86,539
	5 mos.	4,769	18,777,479	1,652,737	22,261,924	2,788,226	4,524,919	608,356	7,975,408	16,771,859	75.3	5,490,065	3,835,136	3,978,422	376,367
St. Louis, San Francisco & Texas	May	159	136,843	1,130	142,887	23,605	14,961	8,582	54,848	107,151	75.0	35,736	27,517	—5,047	—14,029
	5 mos.	159	654,570	5,315	684,514	112,061	72,575	40,688	270,007	520,214	76.0	164,300	123,289	—8,946	—155,891

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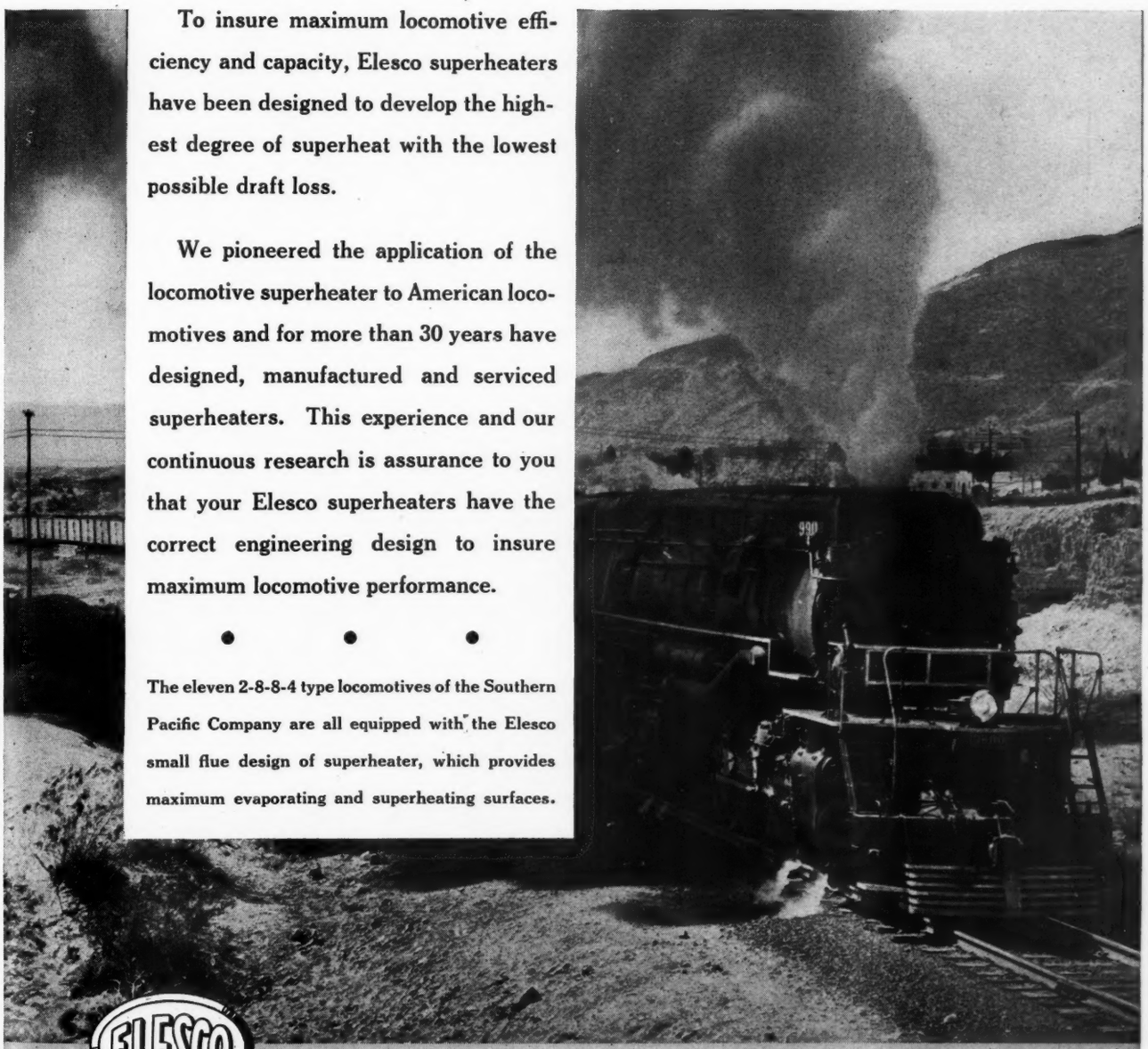
Steam Temperature and Draft Loss



To insure maximum locomotive efficiency and capacity, Elesco superheaters have been designed to develop the highest degree of superheat with the lowest possible draft loss.

We pioneered the application of the locomotive superheater to American locomotives and for more than 30 years have designed, manufactured and serviced superheaters. This experience and our continuous research is assurance to you that your Elesco superheaters have the correct engineering design to insure maximum locomotive performance.

• • •

The eleven 2-8-8-4 type locomotives of the Southern Pacific Company are all equipped with the Elesco small flue design of superheater, which provides maximum evaporating and superheating surfaces.

ELESCO

SUPERHEATERS • FEEDWATER HEATERS
AMERICAN THROTTLES • STEAM DRYERS
EXHAUST STEAM INJECTORS • PYROMETERS

THE SUPERHEATER COMPANY

Representative of
AMERICAN THROTTLE COMPANY, INC.
60 East 42nd Street, NEW YORK
122 S. Michigan Ave. CHICAGO
• • •
Montreal, Canada
THE SUPERHEATER COMPANY, LTD.

REVENUES AND EXPENSES OF RAILWAYS

MONTH OF MAY AND FIVE MONTHS OF CALENDAR YEAR 1941—(CONTINUED)

Name of road		Av. mileage operated during period	Operating revenues: Freight	Passenger	Total (inc. misc.)	Operating expenses: Maintenance of Way and structures	Maintenance of Equipment	Traffic	Transportation	Total	Operating ratio	Net from railway operation	Operating income	Net railway operating income 1941	Net railway operating income 1940
St. Louis Southwestern Lines	May	1,617	$2,013,995	$49,652	$2,136,362	$279,583	$291,149	$88,635	$583,528	$1,318,706	61.7	$817,656	$699,350	$552,372	$182,110
	5 mos.	1,629	9,811,463	232,118	10,392,227	1,172,835	1,462,196	424,105	2,864,239	6,316,836	60.8	4,075,391	3,506,356	2,737,432	1,063,730
Seaboard Air Line	May	4,310	4,089,496	671,927	5,162,265	781,264	944,136	184,558	1,796,705	3,923,105	76.0	1,239,160	914,160	707,056	73,165
	5 mos.	4,310	18,899,800	5,174,283	26,272,139	3,418,937	4,621,159	947,562	9,107,112	19,378,985	73.8	6,893,154	5,118,154	4,164,208	2,169,279
Southern Railway	May	6,567	9,575,380	991,363	11,363,547	1,163,353	1,901,547	179,355	3,570,530	7,173,481	63.1	4,190,066	2,914,685	2,642,065	1,368,532
	5 mos.	6,567	44,086,135	4,848,842	52,639,884	5,577,433	8,613,840	881,111	16,775,469	33,587,248	63.8	19,052,636	13,652,368	12,185,122	7,129,056
Alabama Great Southern	May	315	734,983	97,964	892,472	92,207	180,667	14,778	271,852	586,393	65.7	306,079	172,848	167,368	148,606
	5 mos.	315	3,344,237	428,839	4,049,356	440,686	849,413	76,617	1,171,294	2,665,312	65.8	1,384,044	855,360	819,310	588,531
Cincinnati, New Orleans & Texas Pacific	May	337	1,696,959	101,307	1,887,306	176,809	357,818	32,027	448,487	1,068,045	56.6	819,261	536,581	529,171	419,773
	5 mos.	337	7,563,680	797,917	8,813,036	843,819	1,675,185	153,016	2,162,574	5,120,612	58.1	3,692,424	2,475,142	2,482,483	2,061,231
Georgia Southern & Florida	May	398	243,658	35,078	307,244	36,367	49,107	2,295	105,363	200,597	65.3	106,647	90,888	67,240	1,593
	5 mos.	398	1,129,510	306,996	1,663,224	191,620	231,138	12,294	589,250	1,073,645	64.6	589,579	442,992	296,061	71,432
New Orleans & Northeastern	May	204	355,045	57,150	439,492	45,719	40,206	7,113	117,250	226,537	51.5	212,955	133,213	98,006	40,425
	5 mos.	204	1,604,312	249,803	1,968,663	211,417	181,536	36,010	543,037	1,043,098	53.0	925,565	618,090	480,836	181,337
Southern Pacific	May	8,593	15,185,857	1,911,381	18,486,126	1,632,087	3,151,277	411,897	6,429,821	12,501,566	67.6	5,984,560	4,715,735	3,873,938	1,669,509
	5 mos.	8,599	67,243,582	9,183,115	82,572,686	7,188,900	13,896,429	1,894,207	29,268,296	56,471,241	68.4	26,101,445	19,995,089	16,031,439	4,914,724
Southern Pacific Steamship Lines	May	...	728,162	—358	756,693	20,614	76,081	10,274	420,762	542,596	71.7	214,097	193,250	192,230	36,189
	5 mos.	...	3,707,751	54,311	3,947,073	159,922	486,544	69,067	2,616,144	3,405,264	86.3	541,809	409,285	396,153	187,325
Texas & New Orleans	May	4,417	4,055,899	347,808	4,745,457	624,760	831,454	124,371	1,419,476	3,206,332	67.6	1,539,125	1,213,455	959,128	111,590
	5 mos.	4,417	18,661,669	1,788,415	22,087,875	2,903,166	3,553,580	620,588	6,901,632	15,000,326	67.9	7,087,549	5,521,725	4,159,423	1,599,763
Spokane, Portland & Seattle	May	948	963,151	28,061	1,053,517	277,016	98,040	10,729	319,221	736,612	69.9	316,905	231,938	143,560	77,771
	5 mos.	948	4,059,351	129,275	4,470,887	904,864	450,641	51,029	1,480,375	3,033,539	67.9	1,437,348	1,128,871	743,914	318,845
Tennessee Central	May	286	225,273	4,083	244,904	38,111	35,171	7,608	79,109	170,098	69.4	74,806	48,470	41,923	26,651
	5 mos.	286	1,070,593	19,404	1,162,329	183,145	176,078	34,859	389,069	834,334	71.8	327,995	236,516	175,420	132,600
Texas & Pacific	May	1,885	2,089,621	213,548	2,538,713	271,869	489,885	75,672	744,391	1,698,282	66.9	840,431	606,031	541,280	368,988
	5 mos.	1,886	9,969,148	1,121,483	12,167,478	1,287,761	2,297,379	375,640	3,662,842	8,208,976	67.5	3,958,502	2,988,473	2,552,363	1,880,341
Texas Mexican	May	162	116,127	184	132,027	14,616	11,219	3,239	34,981	75,750	57.4	56,277	35,701	30,286	29,899
	5 mos.	162	466,015	1,753	537,362	75,416	56,392	15,785	165,966	352,913	65.7	184,449	138,815	119,822	40,405
Toledo, Peoria & Western	May	239	227,478	.....	230,971	40,636	15,574	18,229	45,187	135,806	58.8	95,165	56,550	40,629	9,616
	5 mos.	239	1,088,134	13	1,101,779	188,317	80,072	91,582	229,581	655,789	59.5	445,990	257,294	173,136	117,508
Union Pacific System	May	9,877	13,578,912	1,560,669	16,513,368	2,065,081	3,816,575	517,982	5,200,108	12,391,786	75.0	4,121,582	2,337,476	1,551,997	1,280,517
	5 mos.	9,886	61,900,307	7,149,736	75,024,652	8,526,488	17,691,820	2,208,767	25,194,702	57,411,733	76.5	17,612,919	9,527,574	6,389,209	5,559,482
Utah	May	111	52,716	.....	52,735	7,174	17,833	572	15,276	45,519	86.3	7,216	—853	6,505	—5,099
	5 mos.	111	311,518	.....	312,047	42,065	108,585	2,281	87,749	261,607	83.8	50,440	3,692	19,275	18,692
Virginian	May	653	2,471,104	2,097	2,535,553	203,249	450,943	26,253	332,217	1,052,770	41.5	1,482,783	857,783	878,497	929,791
	5 mos.	653	10,013,616	12,210	10,314,941	928,007	2,088,509	125,866	1,595,664	4,934,755	47.8	5,380,186	2,801,726	2,994,039	4,510,145
Wabash	May	2,409	4,173,750	217,264	4,716,818	597,329	716,349	160,442	1,618,296	3,250,229	68.9	1,466,589	1,047,253	728,929	183,040
	5 mos.	2,409	19,822,568	1,072,283	22,365,663	2,608,403	3,571,978	758,168	7,957,917	15,681,015	70.1	6,684,648	5,162,714	3,504,832	996,404
Ann Arbor	May	294	376,554	2,588	389,419	36,966	68,184	13,832	158,962	291,828	74.9	97,591	56,675	47,094	16,131
	5 mos.	294	1,778,568	9,183	1,829,368	138,426	351,228	67,266	767,873	1,387,090	75.8	442,278	297,781	228,500	97,064
Western Maryland	May	859	1,846,441	6,162	1,918,563	244,736	379,622	42,000	468,006	1,192,968	62.2	725,595	505,595	520,234	348,063
	5 mos.	859	8,350,730	32,205	8,681,719	953,453	1,853,074	207,579	2,183,407	5,469,218	63.0	3,212,501	2,332,501	2,349,656	2,165,992
Western Pacific	May	1,195	1,660,285	44,025	1,745,053	286,464	294,022	74,773	631,449	1,343,199	77.0	401,854	309,065	217,878	133,211
	5 mos.	1,195	7,401,735	247,847	7,808,573	1,009,301	1,391,959	335,020	2,956,462	5,979,395	76.6	1,829,178	1,349,031	863,077	182,677
Wheeling & Lake Erie	May	507	1,834,315	.....	1,947,263	250,235	330,171	39,125	501,195	1,155,890	59.4	791,373	182,806	313,009	415,829
	5 mos.	507	7,488,618	26	7,852,695	881,854	1,698,003	190,025	2,174,424	5,120,093	65.2	2,732,602	1,023,080	1,649,009	1,671,366